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HISTORIC STRUCTURE REPORT ADDENDUM
Administrative, Historical, and Architectural Data Sections

SLATEFORD FARM COMPLEX
DELAWARE WATER GAP NATIONAL RECREATION AREA
PENNSYLVANIA

Prepared by
Kenneth W. Bennett
and
Sharon A. Brown

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PREFACE

This historic structure report addendum has been prepared to satisfy the research needs as stated in the task directive approved by Mid-Atlantic Regional Director James W. Coleman, Jr. on July 26, 1985, concerning Delaware Water Gap National Recreation Area under Package No. 111. It updates the Historic Structure Report prepared by Penelope Batcheler in 1982. Data contained in this report will be used in interpretation, preservation/restoration and management needs at the site.

The report focuses on the history of a tract of land located south of Blue Mountain below the Delaware Water Gap. Slateford Farm began as a 391 $\frac{1}{4}$ -acre tract, sold by the sons of William Penn after it was taken from the local Delaware Indians, and evolved into a 169.38-acre tract sold to the U.S. Army Corp of Engineers more than 200 years later. The Delaware Water Gap National Recreation Area was authorized by Congress for inclusion in the National Park System by P.L. 89-158 (79 Stat. 612) on September 1, 1965.

No historical name for the farm was found in the primary source materials. The National Park Service named the tract "Slateford Farm" out of respect for local history. The name Laurel Hill has, on occasion, been applied to the farm.

Most of the historical research was conducted during field trips to Pennsylvania in August and September 1984. Additional material was gathered during a trip to the National Archives in February 1985 and to New York City and Philadelphia in April and May 1985. Architectural data was gathered during field trips in March, May, August, and October 1985.

The authors wish to thank Superintendent Amos Hawkins and his staff at Delaware Water Gap National Recreation Area for their assistance in preparing this report. Special recognition goes to former Chief of Visitor

Services and Resource Management Warren Bielenberg and to Park Historical Architect Thomas E. Solon. Charlotte Cyr Jewell is thanked for providing the historic photographs and for sharing details of her life at Slateford Farm.

Kenneth W. Bennett

Sharon A. Brown

December 1985

ADMINISTRATIVE DATA SECTION

Prepared by
Park Staff

ADMINISTRATIVE DATA SECTION

VITAL STRUCTURE DATA

Title:	Slateford Farm complex, commonly referenced as Pipher Farm, Laurel Hill
Number:	LCS Number 09517 001
Location:	Slateford Area, Northampton County, Pennsylvania, accessed by Route 611 and National Park Road
Treatment Period:	Circa 1865
Order of Significance:	Category 2B, Local

PROPOSED SCOPE OF WORK ON STRUCTURE

Although five buildings comprise the site, visitor access is primarily restricted to the farmhouse and adjacent cabin and springhouse. The remaining structures are interpreted as part of the general historic landscape and are accessed only by park staff.

This site carries an assigned category of 2B, which indicates local significance only. The nomination for inclusion of Slateford Farm in the National Register of Historic Places is in the Historic Resource Study prepared by Sharon A. Brown. However, the nomination of the property to the National Register has been held in abeyance following a decision by the Pennsylvania SHPO that it is ineligible for listing in the National Register. Current use is seasonal, involving open house tours during the annual high visitation period from June through September. Projected use will probably fall within the established parameters, however, the building program and operational specifics have not yet been determined. Future proposed work may be phased depending upon available funding and total project cost.

PROVISION FOR OPERATING STRUCTURE

With the park's desire to provide the general public an opportunity to enjoy not only the recreational amenities but also the cultural aspects of the park, it is important to maintain fragments of this region's agricultural and cultural heritage. It is the ongoing policy of this recreation area to integrate each historic structure as a viable operational component to support the overall park mission. Continued seasonal use would have no impact upon those structures currently available for interior public circulation. However, if the forthcoming building program proposes expanded or altered use (most likely for the farmhouse), then some structural modifications may be required to accommodate the additional building loads. Meeting these new demands could extensively impact specific features of the building or buildings and could lead to a noticeable dilution of their character and general historic integrity. It is imperative to retain those qualities of uniqueness that specifically identify a given historic resource.

COOPERATIVE AGREEMENT EXECUTED OR PROPOSED FOR OPERATING STRUCTURE

There is a cooperative agreement with Upper Mount Bethel Township for fire protection. Security and general safety services are provided by the park.

ANNOTATION OF ALL RELATED DOCUMENTS

Associated documents bear upon the structure's management uses, furnishing requirements, and interpretive needs and should therefore be integrated into the total assessment of this historic structure. They are as follows:

General Management Plan, 1987

Historic Structure Report, 1982

Historic Resource Study, 1985

Study of Furnishings Alternatives, 1985

Classified Structure Field Inventory Reports, 1976

HISTORICAL DATA SECTION

Prepared by
Sharon A. Brown

HISTORICAL DATA SECTION

HISTORY OF SLATEFORD FARM OCCUPANCY

Slateford Farm was owned, inhabited, farmed, and quarried for more than 200 years. Provincial proprietors, absentee landlords, and yeoman farmers all contributed to the farm's development and history. For some, the property was nothing more than a financial investment while for others a home. The farm's acreage was owned by both famous Pennsylvanians and by farmers who were known only to their families, friends, and neighbors. Slateford Farm's history, made by the people associated with it, is unique, yet representative of American agriculture and industry.

Slateford Farm's history is linked to the American Indian and colonial history which preceded Samuel Pipher's purchase of the property in 1790. The tract was originally part of the infamous 1737 Walking Purchase, wherein Thomas and Richard Penn, the sons of the original provincial proprietor, William Penn, obtained most of the land which became Northampton County from the Delaware Indians.¹

On June 1, 1753, Thomas and Richard Penn, as "True and absolute Proprietaries and Governors in Chief of the Province of Pennsylvania," sold a "certain Tract of Land, situate on the North Branch of Delaware River in the County of Northampton" to Nicholas Scull, the province's surveyor general.² The tract's legal description is as follows:

1. William J. Heller, History of Northampton County and the Grand Valley of the Lehigh, 2 vols. (Boston: The American Historical Society, 1920) 1:47-48; Federal Writers' Project, Northampton County Guide, Work Projects Administration, Commonwealth of Pennsylvania (Bethlehem, Pennsylvania: Times Publishing Co., 1939) pp. 23-24.

2. Deed Book A-17, pp. 508-509, recorded August 22, 1753, Pennsylvania Historical and Museum Commission, Division of Land Records, Harrisburg, Pennsylvania (PHMC).

Beginning at as marked Chestnut Oak standing on the Bank of the said River thence by vacant land the four Courses [?] Distances next following viz south fifty five Degrees West three hundred and fifty two Perches to a marked Chestnut Oak South seventy Degrees West seventy eight Perches to a Stone South East one hundred and ninety seven Perches to a Stone and North sixty degrees East three hundred and ten Perches to a marked Chestnut tree standing on the Bank of the said River thence up the same one the several Courses thereof two hundred and twenty seven perches to the place of Beginning Containing three hundred and ninety one Acres and one Quarter of an Acre and the usual Allowance of six Acres per Cont [?] for Roads and Highways.

Scull had the property's original 391 $\frac{1}{4}$ acres surveyed on June 7, 1753, and paid the costs involved³ (See Historical Base Map #2 for 1753 boundary.) He only held onto the property for 13 months and it is doubtful he made any kind of improvement on it. Scull sold it on July 4, 1754, to Amos Strettell of Philadelphia, who was a wealthy landowner and merchant.

Strettell left the property at his death in 1780 to his two daughters Ann and Frances.⁴ They were married to two brothers, Cadwalader and Benjamin Morris, also wealthy Philadelphia merchants. No mention was found in the brief Morris biographies of their ownership of property in Northampton County. No information is thus known about farming or construction the Morris brothers and the Strettell sisters might have had done on the Upper Mount Bethel Township parcel of land.

PIPHER FAMILY

On April 17, 1790, the four Morrises sold "that parcel and tract of Land Situate lying and being in Mount Bethel Township County of Northampton"

3. Survey Book, A-8, p. 29, PHMC.

4. Will, Book R-287, p. 368, 1780 County of Philadelphia, Register of Wills, City Hall, Philadelphia, Pennsylvania.

to Samuel Piper "yeoman" of Northampton County for "seven hundred and eighty two pounds ten shillings lawful money of Pennsylvania." The tract contained 391 $\frac{1}{4}$ acres.⁵

When Samuel Pipher bought the property he paid half the purchase price and took out a mortgage for L332.10. The mortgage gave a description of the property, which was the same as in the 1753 deed.⁶ Even though the property was described as Benjamin Morris' "plantation & Tract of Land," there is still no proof as to what sort of improvements, if any, existed on the land. No evidence has yet been found concerning what structures the Morrises might have placed on the property.

Samuel Pipher's origins are unknown. Various spellings of Pipher exist in historical documents, including Piffer, Pfeiffer, Peyfer, Pfaeffer, Pifer, Phifer, and Peiffer. The spelling in this text will be the one used in the document cited. The park has adapted the "Pipher" spelling and this variation will be used for general references. Spelling variations also occur in the names of Samuel Pipher's wife and daughter--Christina and Christine. Further genealogical research may discover where Samuel and wife Christine were born, when or if they immigrated to Pennsylvania, and perhaps even the ethnic origin and spelling of the Pipher name.

Samuel Pipher was an experienced farmer when he bought the 391 $\frac{1}{4}$ acres by the Delaware River. It is not known where he lived before he brought his family to the Delaware Water Gap area but bits of evidence suggest he lived somewhere in Upper Mount Bethel Township as early as the 1760s. Remaining colonial records reveal the name of Samuel Pipher (with spelling variations) but it cannot be ascertained in some cases

5. Deed Book G-1, pp. 273-274, indenture of April 17, 1790, recorded June 22, 1790, Northampton County Government Center, Easton, Pennsylvania, (NCE).

6. Deed Book G-1, pp. 274-75, indenture of April 17, 1790, recorded June 22, 1790, NCE.

whether this is the same man who owned the farm. No Samuel Pipher (or derivation thereof) was found in Northampton County tax records for the year 1761, but one Samueal Peiffer, a farmer from Bethlehem, paid a proprietary tax of L2.6.8 in 1772. A Samuel Pfaeffer was listed as a resident of Mount Bethel township in 1773. The county tax record for Mount Bethel Township in 1775 listed a Samuel Piper as owning 50 acres of land of which 10 acres were cleared and five acres sowed, one horse and one horned cow. A Samuel Pifer is listed in Mount Bethel Township tax records for 1779. The first United States Census in 1790 for Pennsylvania reveals a Samuel Pifer, with a household of three "free white males of 16 years and upward, including heads of families," three "free white males under 16 years," and five "free white females including head of families."⁷

A Samuel Pfeiffer appears in Revolutionary War records as being in Captain Patrick Campbell's Sixth Company, Sixth Battalion of Northampton County Militia on May 14, 1778. Another Revolutionary War document possibly aids in pinpointing the Slateford Farm owner. During the war an act of the Pennsylvania General Assembly on June 13, 1777, decreed that all white male inhabitants over the age of 18 had to take an "Oath of Allegiance" to the commonwealth. Penalties were severe for anyone who failed to comply with the act, including the loss of citizenship rights. If a man complied he received a certificate which he had to show on demand

7. "Northampton County Tax List For the Year 1761," Copied by the Personnel of the Works Progress Administration (Easton, Pennsylvania: Easton Public Library, 1938), unpublished typescript; Richard and Mildred C. Williams, "Proprietary Tax Northampton County, Pennsylvania 1772," Danboro, Pennsylvania, unpublished typescript, n.y., p. 41; Matthew S. Henry, "Manuscript History of Northampton County, Pennsylvania," unpublished typescript, 1851, p. 12; Preston A. Laury, Index to the Scotch-Irish of Northampton County, vol. 1, supplement, (Easton, Pennsylvania: The Northampton County Historical and Genealogical Society, 1939), pp. 520-521; "Tax Lists in Northampton County Court House 1774-1806," Translated by Rev. A.S. Leiby, unpublished typescript; Bureau of the Census, Heads of the Families at the First Census of the United States Taken in the Year of 1790 Pennsylvania (Washington, D.C.: Government Printing Office, 1908), p. 180.

to prove his loyalty. Any man who left his city or county and failed to carry his certificate could be arrested as a spy. A Samuel Peyfer of Northampton County took the oath on May 11, 1778. Three other Peyfers also took the oath: Christian Peyfer on August 15, 1777, Jacob Peyfer on August 15, 1777, and Peter Peyfer on November 11, 1777.⁸ While Samuel Pipher had three sons by the names of Christian, Jacob and Peter, they were not over the age of 16 in 1777, if the genealogy is correct. The similarity and yet simultaneously, the variation, of the names makes it difficult to determine whether the various Samuel Peyfer, Pfeiffer, Pifers cited in the records are the same man who owned Slateford Farm.

Church records do substantiate that Samuel Pfeiffer was in Northampton County in 1766, for he and his wife Christine baptized their first child Samuel (born March 5) on April 5 in the Reformed and Lutheran Congregations at the Dryland Church, Nazareth Township in Northampton County (now the Trinity, Lutheran and Dryland Reformed) in Hecktown, Pennsylvania. Samuel, who was born between 1736 and 1740, and Christine, born possibly in 1738, became the parents of ten children. Three more sons followed Samuel; Jacob, born about 1769; Christian, born about 1772; and John, born in 1784. The births of the rest of the children were listed in the church record of the Lutheran and Reformed Congregations in Upper Mount Bethel Township. These children were: Michael, born in 1773; Christine, born in 1778; Anna Elizabeth, born in 1782; Maria Catharine, born in 1787; Frederick, born in 1789; and Peter, born in 1791.⁹

8. Richard T. and Mildred C. Williams, "Soldiers of the American Revolution Northampton County Pennsylvania," Danboro, Pennsylvania, unpublished typescript, 1979, p. 288; Henry F. Marx, ed., "Oaths of Allegiance of Northampton County, Pennsylvania 1777-1784 . . . from Original Lists of John Arndt, Recorder of Deeds 1777-1800," typescript, Easton, Pennsylvania: Easton Public Library, 1943, pp. 8, 38, 41.

9. "Church Record of the Reformed and Lutheran Congregations in Nazareth Township Northampton County Pennsylvania formerly The Driland Church now the Trinity Lutheran and Dryland Reformed, Hecktown Pennsylvania," Translated by Dr. Wm. J. Hinke, 1929, unpublished (Continued)

It is not known how many of the Pipher children moved with their parents to the Delaware Water Gap property. The oldest children were grown by 1790 when Samuel bought the tract and they were already establishing their own families. The eldest son Samuel moved to Wayne County (which in 1836 became Monroe County) sometime after 1800 as did his brothers Jacob and Michael. Christian and Christine both moved at sometime to Cayuga County, New York. It is possible, therefore, that only the middle and youngest children lived at Slateford Farm for any amount of time.¹⁰

Even though it is unknown how many, if any, structures were on the property at the time of Samuel Pipher's purchase, it is known that he built a tavern about one mile north of Slateford, Pennsylvania (not yet settled) and half a mile south of Cold Cave. The tavern was known as the "Gap Tavern" and was demolished sometime after 1812. A stone building was erected in its place, which, in 1877 was being occupied as a dwelling house.¹¹

Samuel Pfeiffer, senior, appears on 1798 tax lists for United States direct taxes. These tax lists show names of people who owned real property or slaves, subject to the direct taxes. One list also shows valuations of properties and amounts of taxes assessed. Samuel Pfeiffer, senior, is listed as the occupant and owner of one dwelling house, 30 feet by 22

9. (cont.) typescript, p. 11; "Church Record of the Lutheran and Reformed Congregation in Upper Mount Bethel Township Northampton County 1774-1833," Copied by Dr. Wm. J. Hinke, August-October, 1934, unpublished typescript, pp. 5, 8, 11, 13, 20, 24, 28, 145; Mildred and Lee McMillen, "Genealogical Family Tree," Easton, Pennsylvania. A copy of the Pipher genealogy can be found in U.S. Department of the Interior, National Park Service, "Historic Structure Report, Architectural Data, Slateford Farm, Delaware Water Gap National Recreation Area," (HSR) by Penelope Hartshorne Batcheler, Denver, Colorado, 1982, pp. 192-196.

10. McMillen, "Genealogical."

11. Capt. F. Ellis, History of Northampton County, Pennsylvania with Illustrations Descriptive of its Scenery (Philadelphia: n.p., 1877), p. 251.

feet, which was made of wood and stood two stories tall. The house was placed on 80 perches of land and was assessed a valuation of \$175. This valuation was revised upwards by the tax commissioners to \$210. Another tax list reveals that in 1798 Samuel Pfeiffer, senior, owned 389 acres and 80 perches of land, subject to a valuation of \$1,660. Pfeiffer, senior, owned a house which his son Jacob was living in; a house assessed at \$25. Jacob owned 70 acres of land valued at \$165. Samuel Pfeiffer, junior, is also listed. He owned 32 acres of land which was assessed at \$96. No home was listed for him.¹²

Sometime between 1800 and 1810 Samuel Pipher built a cabin still extant on the property. It is unknown where the family was living until this time; perhaps they were in the tavern near the river or in a homestead established on the property by Amos Strettell or the Morrisises. All that is known is contained in Samuel's will, written on March 16, 1812. After Samuel's death in August 1812 his property was divided among three of his children, Maria Catharine, Frederick and Peter, with provisions made for the care of his widow Christina.¹³ (See Historical Base Map #2 for 1812 boundaries.)

The central portion of the estate, where the Slateford Farm homestead now stands, was given to Samuel's son, Peter. Its description read as follows:

. . . my Son Peter Piffer is to pay for his share of his Sum the old place with all the buildings between him and his Brother Fredrick Piffer and Peter Kocher one Thousand Pounds . . . and my Son Peter Piffer is to have Twenty five acres of Timber Land ten acres of the Land Called Robert Hall's [?] Land and

12. United States Direct Tax of 1798: Tax Lists For the State of Pennsylvania, Microcopy No. 372, Roll 12, Fifth Direct Tax Division, volumes 360-373, First Through Fourth Assessment Districts, vols. 361, 362, 363, Federal Archives and Records Center, Philadelphia.

13. "Last Will and Testament of Samuel Peiffer," Will Book 4, pp. 431-443, dated March 16, 1812, File 2801, Register of Wills, NCE. This cabin, dated by Penelope Batcheler, could be the same house assessed in the 1798 direct tax.

ten acres of the old Tract and also recommend if my Son Frederick Piffer should Move of from my place wild to him by me he is not to Sull ¹⁴ his place the hole of the place is to Come to Peter Piffer. . . .

Samuel Pipher made his wife Christina, son Peter and son-in-law Peter Kocher (married to Maria Catharine, or Mary) the executors of his estate. He gave Christina "the house on the old place is Called the new house during her life," and Peter was to provide her with firewood and with a good cow. Peter was also to provide his mother with 100 pounds of pork, 10 bushels of wheat, 10 bushels of "rey" (rye), and 10 bushels of buckwheat yearly. All of these provisions were to be delivered to Christina at her house mentioned in the will. Christina was also to take her bedstead, a bureau and chest, and all her clothes and utensils she may need. Additionally, all the money and cash in Samuel's house after his death was to go to Christina.¹⁵

The general intent of Samuel Pipher's will was to single out his three youngest children for special consideration, to give them a start in life. At the time of Samuel Pipher's death in 1812 Mary was 25, Frederick 23, and Peter 21. Mary, Frederick, and Peter were given the entirety of Samuel's land in Upper Mount Bethel Township.

An inventory of Samuel Pipher's property was taken on August 11, 1812, by his son Frederick and neighbor Aaron Depuis. The estate was settled more than a year later, on September 14, 1813. The value of goods and chattel not bequeathed was \$847.09. Christina received goods and chattel worth \$194.16 and \$336.75 in cash. After the surplus goods were sold, Samuel's personal debts were paid, and funeral and other expenses were paid (including a "demand" by Peter Peiffer for working harvest and hauling grain, and a "demand" by Peter Kocher for liquor and hauling),

14. Ibid., p. 432.

15. Ibid., p. 431.

the balance remaining to be divided, less advancements made previous to Samuel's death to the children, totaled \$1,692.97.¹⁶ Samuel Pipher died before his son Peter built the Slateford Farm farmhouse.

The basic division of the Samuel Pipher property (the 1790 purchase of 391¼ acres, plus two other purchases of 80 acres in 1793 and 31 acres, 150 perches in 1797) into three major portions was reconfirmed by releases in 1816, 1817, and 1820. From the will, Mary and her husband Peter Kocher had been given 123 acres 175 perches of land on the eastern side of the estate along the Delaware River. Frederick received 200 acres on the western end and Peter got the 182 acres in the middle where the Slateford Farm complex now stands. By the six releases recorded at the Easton, Pennsylvania, courthouse in 1820, Samuel and Christina's other surviving children and their spouses gave up all claim to these land parcels by acknowledging receipt of full payment, by Mary, Peter, and Frederick, for their share of the estate.¹⁷

The remaining history of Pipher stewardship of Slateford Farm concerns Peter Pipher and his son Samuel, for the farm complex is located on property they in turn inherited. After Peter married, he and his wife Elizabeth began to raise a family; their first child, Samuel, was born in 1813. It is not known where Peter, Elizabeth, and their growing family lived between 1812 and the early 1830s. They may have lived with Peter's mother Christina or perhaps an older farmstead on the property dating from the Strettell-Morris era. In 1827 Peter built an extant springhouse next to the cabin. He placed his initials and the year on a date stone in the north gable wall where they can be seen today. The growing Pipher family probably needed larger accommodations and in 1833 Peter built the main farmhouse still standing. Once again he signed his

16. "Inventory of the Estate late of Samuel Peiffer," filed 26th Aug. 1812, File 2801, Register of Wills, NCE. "Samuel Peiffer Settlement of the Estate late of," filed 14th Sept., 1813, File 2801, Register of Wills, NCE.

17. Deed Book D-4, pp. 449-456, recorded August 28, 1820, NCE.

work; he gouged his initials and the date--P18 . . . 33P--in the cornice of the flat pedimented frontispiece over the front door.¹⁸

When Peter was 50 years old in 1841 he sold six separate tracts of land totalling 199 acres, 109 perches to his eldest son Samuel for \$7,500. The largest tract was 162 acres, 158 perches which undoubtedly was the core of the present-day Slateford Farm.¹⁹ It is not known where Samuel, his wife Elizabeth and their children were living at the time of this sale in 1841. Perhaps they lived in the cabin after the death of Samuel's grandmother Christina in 1838. Both father and son, Peter and Samuel, were raising children in the 1830s, so it is possible that after the sale Peter and Elizabeth stayed on Slateford Farm with their children and grandchildren.

Several structures still stand at Slateford Farm which may date to the Peter and Samuel Pipher era. Remnants of a stone lime kiln are located in the woods behind the main farmhouse. Extensive stone pile rows delineate boundaries of fields and mark partial boundaries of the 1812 Peter Pipher farm. The exact location of all fields utilized by the Piphers is unknown.

Both Samuel's and his father Peter's names appear on an 1850 agricultural census. In 1850 Peter had already sold Slateford Farm to his son Samuel but he was listed as owning 158 acres of improved land and 25 acres of unimproved land. The cash value of his farm was \$9,000 and the value of his farming implements and machinery was \$400. Peter owned six horses, seven milch cows and raised 18 pounds of wool, 75 bushels of Irish potatoes, 400 bushels of buckwheat, 25 tons of hay, 200 bushels of wheat, 300 bushels of rye, 400 bushels of Indian corn, and 200 bushels of oats. He also produced 700 pounds of butter. Peter owned four other

18. McMillen, "Genealogy"; Batcheler, HSR, pp. 88-103, 107-153.

19. Deed Book G-6, pp. 570-571, indenture of April 17, 1841, recorded December 27, 1841, NCE.

cattle, six sheep, and 26 swine; all valued at \$600. The value of his homemade manufactures was \$10 and the value of animals he slaughtered was \$200. Peter was not listed in the 1860 agricultural census.²⁰

Peter died at the age of 80 on April 23, 1871. In his will, dated May 27, 1868, he left his wife Elizabeth the use of his house and lot of land in Slateford, Pennsylvania, for the rest of her life. She additionally received all Peter's real estate, furniture and \$2,000 in cash. Peter's estate was divided into seven shares and divided among six children and the estate of a seventh child, already deceased. At Peter's death his personal property and real estate were valued at \$25,897.²¹

Peter and Elizabeth's son, Samuel, and his wife Elizabeth owned the central portion of Samuel's grandparents' original land for 27 years, from 1841 until 1868. They raised their children on the property, most likely in the house that Samuel's father had built with his own hands. In the 1850 agricultural census Samuel Phifer is listed as owning 140 acres of improved land and 35 acres of unimproved land. The cash value of his farm was \$6,000 and the value of his farming implements and machinery was \$360. He owned seven horses, six milch cows, nine other cattle, 16 sheep, and 15 swine. The value of his livestock was \$600. Samuel raised 45 pounds of wool, 100 bushels of Irish potatoes, 100 bushels of buckwheat, 30 tons of hay, 100 bushels of wheat, 50 bushels of rye, 600 bushels of Indian corn, and 100 bushels of oats. He and his family produced 700 pounds of butter. The value of Samuel's homemade manufactures was \$10 and the value of his slaughtered animals was \$100.²²

20. Agricultural Schedules, Pennsylvania, Federal Decennial Censuses, 1850-1880, Microcopy T-1138, roll 7, 1850, and roll 17, 1860, National Archives.

21. "Last will of Peter Pipher decD," proved May 4, 1871, File 8648, Register of Wills, NCE. "Inventory Estate of Peter Pipher decD" Filed June 3, 1871, File 8648, Register of Wills, NCE.

22. Agricultural Schedules, Pennsylvania, Federal Decennial Censuses, 1850-1880, Microcopy T-1138, Roll 7, 1850, National Archives.

In the 1860 census Samuel Pipher was listed as owning 160 acres of improved land and 26 acres of unimproved land. The cash value of his farm was \$9,000 and the value of his farming implements was \$500. Samuel owned five horses, seven milch cows, 12 sheep, and 12 swine; all valued at \$800. He raised 60 bushels of wheat, 300 bushels of rye, 400 bushels of Indian corn, 200 bushels of oats, 40 pounds of wool, one bushel of peas and beans, 300 bushels of Irish potatoes, 200 bushels of buckwheat, 25 tons of hay, and four bushels of clover seed. The value of his orchard products was \$20. The value of Samuel's homemade manufactures was \$20 and the value of his slaughtered animals was \$300.²³

It is not known why Samuel and Elizabeth decided to sell the property which had been in Pipher hands since 1790. Perhaps they succumbed to the instant wealth offered by the prospective buyers. The land itself could have been steadily deteriorating in its ability to sustain crops. Samuel and Elizabeth's five children were all grown by 1868 so it is also possible that the parents wanted to retire to a simpler life while in their early-to-mid-50s.

For whatever reason, Samuel and Elizabeth sold the Pipher homestead on December 18, 1868, to a group of businessmen for \$25,000. The businessmen--Uzal Cory, Julius S. Howell, Theodore D. Howell, Samuel R. Elton, Richard H. Stearns, and Richard D. Wilson--formed the New York and Delaware River Slate Company. They were interested in the Pipher land not for its agricultural value, but for its slate potential. It was well known that the farm was located on top of a soft slate belt and that successful slate quarries had been operating in the area for years.

In the deed, Samuel excepted from the sale "all the grain in the grond with the right to harvest; store and thresh the same upon the premises using the Barn and Granary for those purposes. . . ." All the straw,

23. Ibid., Roll 17, 1860.

however, belonged to the purchasers. Samuel and his family also reserved the use and occupancy of the buildings on the property until April 1, but Samuel was not to cut any more wood, except for firewood, nor was he to sell or remove any wood. All the wood left after April 1 belonged to the buyers. Samuel was also not allowed to remove any manure, as it was "expressly agreed that the manure now made and that may accumulate between now and said first day of April is covered by this conveyance to the granters." Two hundred posts and 3,000 rails already cut and in pieces on the property belonged to Samuel.²⁴

Samuel and Elizabeth Pipher moved near Slateford where they lived until their deaths in 1896 and 1889. Samuel's will, dated September 17, 1892, and amended January 16, 1896, specified his furniture, utensils, and household goods be left to his daughter Marietta. Property in Stroudsburg, Pennsylvania, was left to Marietta, and a house in Portland, Pennsylvania, was left to a grandson. All the rest of Samuel's property was shared among his five children.²⁵

An inventory of Samuel Pipher's estate taken March 19, 1896, appraised his goods and chattel at \$3,491.40. Gold discovered in a wagon shed was subsequently added to the appraisal on July 10, 1896. At the estate sale on April 26, 1896, many agricultural and household goods were sold, in addition to bank shares. The sale amounted to \$2,070.29.²⁶

Scant historical data exists concerning construction of the Slateford Farm cabin, farmhouse or springhouse. Only the dates of construction for the farmhouse and springhouse are known specifically; and only one tax

24. Deed Book C-12, pp. 612-613, indenture of December 18, 1868, recorded January 8, 1869, NCE.

25. "Last Will & Testament of Samuel Pipher dec'd" Probated March 18, 1895, File 13933, Registry of Wills, NCE.

26. "Estate of Samuel Pipher of Upper Mt. Bethel Township deceased, "Vendue List Filed May 25, 1896, File 13933, Register of Wills, NCE; "Inventory Estate of Samuel Pipher dec'd" Filed July 13, 1896, File 13933, Register of Wills, NCE.

record provided limited data on the cabin. The remaining buildings in the Slateford Farm complex, which are typical of Delaware Valley vernacular farm architecture, were not documented.

QUARRY COMPANY

The New York and Delaware River Slate Company owned Slateford Farm from 1868 until 1873. The venture evidently was not managed well and the company's principal stockholders began quarreling among themselves. Possibly as a result of this in-fighting, rather than any unproductivity of the quarry dug near the Pipher farmhouse, the sheriff of Northampton County, Enos Werkheiser, seized the farm. One of the original founders of the company, Julius S. Howell, had filed a suit in equity in March 1872 in Easton against the president of the company, Charles W. Remington. Howell's suit also named Uzal Cory and Richard H. Stearns, as well as stockholders Thomas G. Groves and William J. Williams. The results of the suit are not known, but by November 1873 the sheriff was ordered by the County Court of Common Pleas in Northampton County in a writ of levari facias, to take the 181 acres and 112 perches of land and to levy against the defendants a debt of \$4,645.82 owed to Samuel Pipher. At a public sale on December 27, 1873, the sheriff sold the property to the highest bidder, John A. Morison of New York City, for \$20,000.²⁷

Very little information is known of the men involved in this quarrying venture. A New York City 1868/69 directory lists several of the names and addresses, but no slate company records were found. No documentary evidence has as yet been found which either supports or disputes prevalent belief that the New York and Delaware River Slate Company's officers used the Pipher farmhouse as an office and/or housing for quarry workers.

27. Equity Docket 2, p. 95, dated March 16, 1872, Prothonotary Office, NCE. Deed Book H-20, pp. 643-645, sold December 27, 1873, recorded March 17, 1890, NCE.

NEW YORK/NEW JERSEY OWNERS

John A. Morison was a wealthy New Yorker who apparently ran the farm in absentia for its quarrying, and possibly tenancy, income. Morison paid taxes on the quarry from 1874 to 1879, after which time active quarrying probably ceased. Morison owned the property until his death in 1897 and his heirs held on to it until 1913.²⁸ Tenants did work the farm for at least a few years during the Morison family ownership. The extant woodshed on the property dates to the late nineteenth century and was probably built by Morison. No further history of the structure is known.

In his will, dated September 4, 1885, John A. Morison left personal belongings and \$5,000 yearly income from his estate to his sister Jane M. Coffin. Morison's executors--his sister Jane, nephew Robert S. Morison, and friend William G. DeWitt--had the power to sell and dispose of his real estate. In April 1899 Morison's estate was appraised and the "Farm situated in Upper Mount Bethel Township consisting of about 180 acres upon which a Slate Quarry is located" was valued at \$3,500. As executor, Robert S. Morison sold the property to Edwin G. Reynolds on September 26, 1913.²⁹

Reynolds bought the 181 acres and 112 perches from Morison at a private sale for \$1.00. He and his wife, Icie, were renting farmers in 1900 in Franklin Township, Somerset County, New Jersey. In the 1905 census the Reynoldses were listed as owning a farm which was mortgaged. In

28. Elizabeth D. Walters, research note, March 19, 1969, DEWA Park Files, "Pennsylvania-Northampton County Land Titles"; Deed Book B-41, pp. 365-367 indenture of September 26, 1913, recorded October 6, 1913, NCE.

29. "Will of John A. Morison" September 4, 1885 proven January 15, 1898, Register of Wills, NCE; "Estate of John Morison" April 17, 1899, Collateral inheritance Book 2, p. 7, Register of Wills, NCE; Deed Book B-41, pp. 365-367, indenture of September 26, 1913, recorded October 6, 1913, NCE.

the 1920 census Edwin was listed as a farmer who owned his own farm. This seems to indicate that the Reynoldses were absentee owners who may have purchased the property for speculative or rental income purposes, although it is not known that sort of deal was made with Robert S. Morison on a purchase price. Furthermore, nothing is known of any renters on the property. It is thought that the Slateford Farm homestead stood empty through the 1910s.³⁰

Edwin and Icie Reynolds sold their property in Northampton County to Charles M. Munsch on May 5, 1924, for \$3,000. Munsch owned a pharmacy in New York. He made many changes on the property, including covering the main farmhouse with a stucco cement, changing the Samuel Pipher cabin, building the Louis Cyr farmhouse, building an ice house, and installing a concrete slab which spans the old barn foundations. The farmhouse was furnished with Victorian furniture brought in by Munsch from New York. In the fall of 1929 Munsch, who was from Alsace-Lorraine, met Louis Cyr, a French-Canadian from Quebec, in a church in the Bronx. The two spoke French and Munsch hired Cyr to be his caretaker at Slateford Farm.³¹ Cyr and his family took care of Slateford Farm from 1929 until government purchase of the property in 1966. (See Historic Photographs section for Munsch/Cyr era photographs of Slateford Farm era.)

On May 5, 1936, Charles Munsch and his wife, Marie sold the farm to their daughter Alice for \$1,800. Munsch died the next year in the Cyr house. Louis and Lottie Cyr continued to tenant farm the land under

30. Deed Book B-71, pp. 365-367, indenture of September 26, 1913, recorded October 6, 1913, NCE. Letter Bette Barker, Division of Archives and Records Management, Department of State, State of New Jersey, to Sharon A. Brown, October 3, 1984; Letter, Clark Beck, Special Collections and Archives, Rutgers, the State University of New Jersey, New Brunswick, New Jersey, to Sharon A. Brown, September 26, 1984.

31. Deed Book A-69, pp. 566-567, indenture of May 5, 1924, recorded December 27, 1938, NCE; Interview with Charlotte Cyr Jewell, Portland, Pennsylvania, August 29, 1984.

Alice's ownership as they had under her parents. This arrangement continued until the farm property was purchased as part of the acquisition process for the Delaware Water Gap National Recreation Area. Alice M. Munsch sold 169.31 acres to the U.S. Army Corps of Engineers on September 16, 1966. Louis Cyr and his family continued to live on the farm and Louis worked for the National Park Service until his death in 1971. Since that year Cyr's daughter Charlotte Cyr Jewell and her family have farmed the property under a special use permit.³²

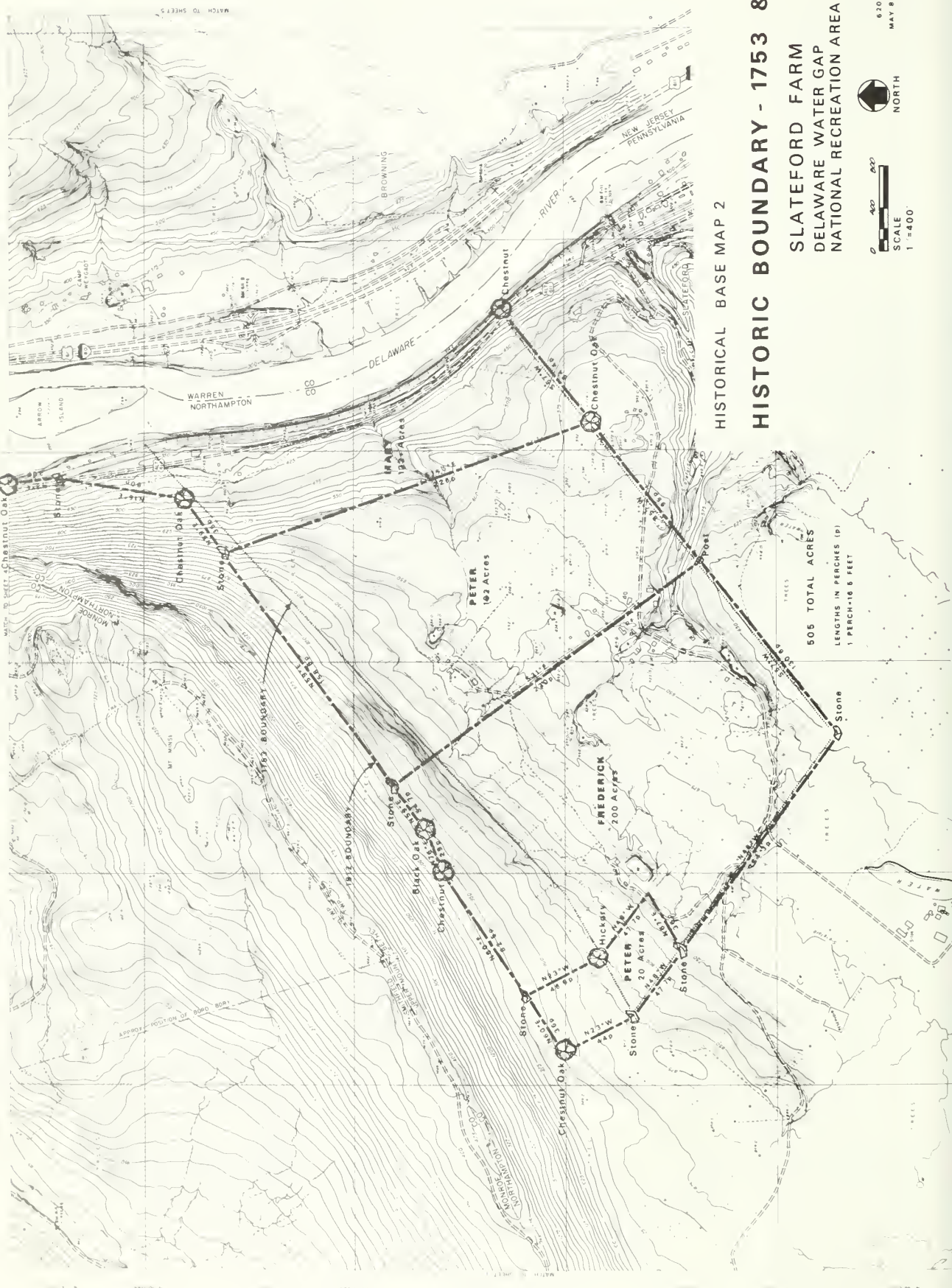
Other structures at the farm site were added by National Park Service staff in the early 1970s. Both the slate shanty and the outhouse were added for interpretive purposes. (See Historical Base Map #4 for 1985 Slateford Farm existing conditions.)

The Delaware Water Gap National Recreation Area has been part of the National Park System since 1965 and Slateford Farm was acquired the next year. The farm's historical and cultural resources are derived from its location in Southeastern Pennsylvania, an area settled early in the 1700s and rich in ethnicity and agriculture and quarrying activity. The farm's land was part of the Walking Purchase of 1737, and became part of Northampton County in 1750, and later, Upper Mount Bethel Township.

Slateford Farm's value is in the scenic beauty of the view from the farmhouse's front porch, in the farm's proximity to the Delaware River and the Delaware Water Gap, and in the utilization of both the farm's land for agriculture and of the slate bed underneath. It is also in the knowledge that several generations of Pipher children were born and raised there. Slateford Farm represents stability and continuity, and its history is integral to that of its surrounding region, state, and nation.

32. Deed Book F-67, pp. 241-242, indenture of May 5, 1936, recorded January 27, 1937, NCE; Interview with Charlotte Cyr Jewell, Portland, Pennsylvania, August 29, 1984 and May 1, 1985; Deed, Tracts 121 and 122, Delaware Water Gap National Recreation Area, vol. 300, p. 2, NCE.

1:270,000 1:272,000 1:274,000 1:276,000 1:278,000 1:280,000 1:282,000 1:284,000 1:286,000 1:288,000 1:290,000 1:292,000 1:294,000 1:296,000 1:298,000 1:300,000



HISTORICAL BASE MAP 2

HISTORIC BOUNDARY - 1753 & 1812

SLATEFORD FARM
DELAWARE WATER GAP
NATIONAL RECREATION AREA



505 TOTAL ACRES
LENGTHS IN PERCHES (P)
1 PERCH=16.6 FEET

1985 Slateford Farm

EXISTING CONDITIONS



KEY

- A Cabin
- B Springhouse
- C Main House
- D Garage/Barn Foundation
- E Quarry
- F Woodshed
- G Slate Shanty
- H Ice House Foundation
- I Outhouse
- J Lime Kiln
- K Stone Rows
- L Fields
- M Cyr Farmstead
- N Kiefaber House

scale:



North

RECOMMENDATIONS FOR FURTHER RESEARCH

Further research on the activities of Amos Strettell and the Morrises at the site is needed. It is not known where or if a Morris farmstead stood, when buildings may have been built, or the fate of these structures before or after Samuel Pipher bought the farm. The actions of the various Samuel and Christina Pipher descendants require further scrutiny. The sons, grandsons, and great-grandsons and their spouses bought and sold property until after 1900 and some of this property was part of the original farm. Such deed research would further define the changes in property holdings throughout the years.

Further research can be done on the late nineteenth and early twentieth century absentee owners of the property--Morison and Reynolds. Emphasis in research was not placed on these individuals.

Efforts were made to contact Alice Munsch, who was living at this writing in New York City. She is ailing and elderly, and further efforts to reach her may be successful. Munsch was an amateur photographer and she may possess early to mid-twentieth century photographs of the Slateford farmstead.

PERSONS CONSULTED DURING RESEARCH

Barbara Adams, archivist, Henry Francis du Pont Winterthur Museum, Winterthur, Delaware.

Jim Ashton, The New York Historical Society, New York, New York.

Penelope Hartshorne Batcheler, Independence National Historical Park, National Park Service, Philadelphia.

Clark Beck, public services library, Special Collections and Archives, Rutgers University Libraries, Rutgers, The State University of New Jersey, New Brunswick, New Jersey.

Natalie F. Cooper, corresponding secretary, The Somerset County Historical Society, Somerville, New Jersey.

Maurice S. Dimmick, director of court services, Northampton County Government Center, Easton, Pennsylvania.

Emerson Eckrote, Pennsylvania Historical and Museum Commission, Division of Land Records, William Penn Memorial Museum and Archives Building, Harrisburg, Pennsylvania.

Terry Price Gangaware, Librarian, Henry F. Marx Local History and Genealogy Collection, Easton Area Public Library, Easton, Pennsylvania.

Charlotte Cyr Jewell, Portland, Pennsylvania.

E. Lee McMillen, Easton, Pennsylvania.

Matilda Bartow McMillen, Easton, Pennsylvania.

Terry A. McNealy, Librarian, Spruance Library, The Bucks County Historical Society, Doylestown, Pennsylvania.

Jane S. Moyer, Northampton County Historical and Genealogical Society, Easton, Pennsylvania.

Linda Stanley, Archivist, Historical Society of Pennsylvania, Philadelphia, Pennsylvania.

James S. Yolton, Associate Professor of Geology, Upsala College, East Orange, New Jersey.

REPOSITORIES CONSULTED DURING RESEARCH

Bushkill, Pennsylvania
Delaware Water Gap National Recreation Area
Park Files

Elverson, Pennsylvania
Hopewell Village National Historical Site (now Hopewell Furnace)
Park Files

Lakewood, Colorado
Rocky Mountain Regional Office Library

New York City, New York
New York Public Library
U.S. History, Local History and Genealogy Division

Philadelphia, Pennsylvania
Federal Archives and Records Center
Tax Records

Winterthur, Delaware
Henry Francis du Pont Winterthur Museum

ANNOTATED BIBLIOGRAPHY

PRIMARY SOURCES

Manuscript Materials

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History Files.
Elizabeth D. Walters, Research Notes

Easton, Pennsylvania. Easton Area Public Library.
Henry F. Marx Local History and Genealogy Collection.
Church Records
Vertical File

Easton, Pennsylvania. Northampton County Government Center.
Deeds
Promonthory Office
Register of Wills

Easton, Pennsylvania. Northampton County Historical and Genealogy Society.
Revolutionary War Records
Tax Records
Church Records

Harrisburg, Pennsylvania. Pennsylvania Historical and Museum Commission.
Division of Land Records

New York City, New York. New York Public Library.
U.S. History, Local History and Genealogy Division.

Philadelphia, Pennsylvania. County of Philadelphia. City Hall.
Register of Wills.

_____. Federal Archives and Records Center.
Tax Records.

Washington, D.C. National Archives.
Agricultural Schedules, Federal Decennial Censuses.

The records kept in these repositories provided much of the data on the Pipher family and the owners of the New York and Delaware River Slate Quarry Company. Wills, estate inventories, sheriff's records, deeds of land purchases, tax records and church records helped to piece together at least a skeletal framework of the Piphers' land purchases, genealogy and personal property. The original Penn grant and Scull survey were located in Harrisburg.

Published Documents

Books

Bureau of the Census. Heads of Families at the First Census of the United States Taken in the Year 1790 Pennsylvania. Washington, D.C.: Government Printing Office, 1908.

Ellis, Capt. F. History of Northampton County, Pennsylvania with Illustrations Descriptive of its Scenery. Philadelphia: n.p., 1877.

These published primary sources provided information on Pipher family activities in Northampton County.

Unpublished Documents

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Henry, Matthew S. "Manuscript History of Northampton County, Pennsylvania" 1851. Typescript located in Marx Collection, Easton Public Library. Original handwritten copy at Historical Society of Pennsylvania, Philadelphia.

Hinke, Dr. Wm. J., translator. "Church Record of the Reformed and Lutheran Congregations in Nazareth Township Northampton County, Pennsylvania formerly The Dryland Church now the Trinity Lutheran and Dryland Reformed, Hecktown, Pennsylvania" 1929. Typescript located in Marx Collection, Easton, Public Library.

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Marx, Henry F. ed. "Oaths of Allegiance of Northampton County Pennsylvania 1777-1784 . . . from Original Lists of John Arndt, Recorder of Deeds 1777-1800" Easton Public Library, Easton, Pennsylvania, 1932.

"Northampton County Tax List For the Year 1761" Copied by the Personnel of the Works Progress Administration. Easton, Pennsylvania, 1938. Typescript located in Marx Collection, Easton Public Library.

United States Direct Tax of 1798: Tax Lists for the State of Pennsylvania, Microcopy No. 382, Roll 12, Fifth Direct Tax Division, volumes 360-373, First Through Fourth Assessment Districts, vols. 361, 362, 363. Microfilm located at Federal Archives and Records Center, Philadelphia.

Williams, Richard T. and Mildred C. "Proprietary Tax Northampton County, Pennsylvania 1772" Danboro, Pennsylvania. Typescript located in Marx Collection, Easton Public Library.

_____. "Soldiers of the American Revolution Northampton County, Pennsylvania" Danboro, Pennsylvania. Typescript located in Northampton County Historical and Genealogical Society.

These unpublished primary source documents also provided data on Pipher family activities in Northampton County, Upper Mount Bethel Township. The Hinke church records and Williams records provided Pipher genealogy information.

SECONDARY SOURCES

Books

Federal Writers' Project. Northampton County Guide. Work Projects Administration, Commonwealth of Pennsylvania. Times Publishing Co., 1939.

Heller, William J. History of Northampton County and the Grand Valley of the Lehigh. Vols. I & II. Boston: The American Historical Society, 1920.

Laury, Preston A. Index to the Scotch-Irish of Northampton County. Vol. 1 supplement. Easton, Pennsylvania: The Northampton County Historical and Genealogical Society, 1939.

These secondary source books provided data on Northampton County.

Report

U.S. Department of the Interior, National Park Service. "Historic Structure Report, Architectural Data, Slateford Farm, Delaware Water Gap National Recreation Area," by Penelope Hartshorne Batcheler. Denver, Colorado, 1982. On file at DEWA.

Batcheler's text provided architectural data on the extant farmhouse and contained a copy of the Pipher family genealogy.

Personal Interview

Jewell, Charlotte Cyr. Portland, Pennsylvania. Interview, August 29, 1984; and May 1, 1985.

Miscellaneous Correspondence

Letter, Bette Barker, Division of Archives and Records Management, Department of State, State of New Jersey, to Sharon A. Brown, October 3, 1984.

Letter, Clark Beck, Special Collections and Archives, Rutgers, The State University of New Jersey, New Brunswick, New Jersey, to Sharon A. Brown, September 26, 1984.

The writers of these letters provided data on Edwin and Icie Reynolds.

HISTORIC STRUCTURE REPORT ADDENDUM
Architectural Data Section

SLATEFORD FARM COMPLEX
DELAWARE WATER GAP NATIONAL RECREATION AREA
Pennsylvania

Prepared by
Kenneth W. Bennett

ARCHITECTURAL DATA

INTRODUCTION

This historic structure report addendum augments and updates the information covered in Penelope Batcher's architectural data section to the Delaware Water Gap Slateford Farm, Historic Structure Report (NPS 1982). This addendum contains other elements necessary to fulfill the requirements of NPS-28, Cultural Resources Management Guideline.

Future development at the Slateford Farm site will be governed by the continued long term preservation of the farmhouse. The interpretive program will communicate the continuum of and changes occurring in the farming lifestyles, and agricultural and slate quarrying technology. The economic and social aspects of recreation and tourism in the Poconos and Delaware Water Gap will also be interpreted. The farmhouse interior will be adaptively developed to house exhibits which may include furniture.

Architectural treatment for the farmhouse will include either the retention or removal of the stucco on the elevations, repairing the sublayers of wood framing and clapboard siding, retaining the kitchen ell in its present form and retaining the concrete front porch (see appendices F and G for copies of memorandum detailing follow-up, development decisions for Slateford Farm). Also, considerations must be given to the potential of not only physical but visual impacts to the historic scene. Other issues to be discussed include the possible reactivation of the second floor restroom. Finalization of this action would lead to a mandated site analysis assessing both environmental and historical impacts related to the installation of a new well, septic system and leach field. Finally, the question of how to accommodate the park's interpretive program without sacrificing the site's historic integrity will be investigated.

Aside from the general issues, the specific components found within this document are as follows: 1) a structural engineering analysis; 2) a mechanical engineering analysis; 3) an electrical engineering analysis; 4) a sanitary engineering analysis; 5) a life safety code analysis; 6) a handicapped access analysis; 7) an energy conservation analysis; 8) an updated set of Existing Condition Drawings based on existing HABS drawings; 9) an updated package estimating detail (Form 10-802); and 10) a comprehensive narrative updating the changes in the structures' existing conditions along with expanded recommendations concerning types of treatments and their specific applications.

Please note, issues relating to the existing garage/barn foundation ruins will not be addressed in this section.

PHYSICAL HISTORY--SPECIFIC PROBLEM ANALYSIS

Main Roof

Updated Existing Condition. The main roof is composed of slate shingles secured to a gable framed roof system. It shows some signs of weathering, especially at the eaveline and along the edge of the low-profile, cement stucco parapets (see illustration 5). These parapets were probably installed to divert water away from the rake drip line but do nothing more than entrap moisture beneath and within the cement stucco, accelerating the freeze-thaw cycling effect and resulting in cracked and crazed shingles. Within the overall roof area are isolated patches of deteriorated shingles, none of which are extensive. There is evidence of moisture damage where the roof dies into the two opposing stuccoed chimneys. This damage is not confined to the immediate shingles but also extends into the stucco and brick chimneys. Several pairs of mortise and tenon ridge connection rafters are without their single wood friction pins (see illustration 6). Missing from the roof's drainage components are gutters, downspouts, and splashblocks.

Kitchen Roof

Updated Existing Condition. This roof is composed of a ribbed-seam, metal skin laid over a shed roof framing system sloping downward from south to north. Only a cursory examination was made of the roof area because of the questionable rigidity of the roof's framing system. The roof skin appears to be intact and continues to efficiently shed water; however, active oxidation over the entire surface is apparent and potentially detrimental to the metal's serviceability. The roof's drainage components are missing: gutters, downspouts, and splashblocks.

Porch Roofs

Updated Existing Conditions. Both porch roofs are essentially shed roofs. The south porch roof system has an extended gabled eave which is typical of both opposing transverse elevations. Both porch roofs are clad of the same lapped material, 36-inch wide, asphaltic roll-roofing strips which appear to be in fairly good condition (see illustration 4). The only immediate problem is along the juncture where the roof line and the stuccoed facade meet. The existing flashing is deteriorating and no longer provides a tight water seal at several points along both porch horizontal breaklines. No drainage components (i.e. gutters, downspouts, and splashblocks) are currently in place on either of the two porches.

General Roof Recommendations. The main roof requires patching of those deteriorated areas with new slate shingles. These should match the existing shingles in terms of length, width, thickness, color, texture, and exposure to the weather. New, properly sized, copper flashing pieces should be used when replacing individual shingles. Rotted shingle laths should be replaced with treated material of the same thickness and approximate size. Both shingle replacement and flashing replacement around the chimney penetrations are required. New flashing material needs to be installed where the porch roofs intersect the stuccoed wall

faces. Both internal chimney diagonal traverses need repointing. Missing rafter pins should be replaced with new hardwood dowels, or the structurally unstable rafter pairs should be augmented with collar ties. This condition is discussed in appendix A.

Both porch roofs need to reflect a specified historic appearance. The work would probably require removing the existing roofs and replacing them with galvanized sheet metal roofing material painted to match the kitchen roof's existing surface color. A time-continuum approach would dictate that the existing roof materials will remain intact and be preserved in place.

There are some structural concerns, especially regarding the south porch framing system. The spandrel beam that bears segmentally over the columns should be unified. There is a need to selectively replace some of the partially checked and transversely split rafter members and to reinforce their bearing connections along the spandrel beam.

A more in-depth evaluation of the porch's structural integrity can be found in appendix A.

South Elevation

Updated Existing Condition. At the second floor level, there are noticeable cracks in the stucco due to expansion and contraction cycling. However, they do not appear to threaten the stucco's integrity. This yellow-colored, stucco exterior finish, typical on all elevations, is a rough textured, very hard, cementitious surface treatment. Field observation indicates a composition of portland cement, lime, coarse grained sand, and small bits of gravel that serve as a texturing agent within the stucco mix.

The most prominent ingredient appears to be portland cement, which creates a high-strength medium. Lime was added to enhance both

plasticity and uniformity of mix. Some lime fines remain undissolved and are visible throughout the surface area of the stucco, indicating a lack of homogeneity within the mix itself.

Sand quantities used with each batching were probably not well graded and certainly do not meet current standards (ASTM C144) required for today's stucco applications. Irregularities found within both the sand and gravel aggregates contribute to the general coarseness and porosity of the existing stucco. Because this type of stucco mix was used on the farmhouse, weathering has occurred (based on a small sample taken) to depths ranging from 1/8 inch to 1/4 inch below the exposed surface, causing moderate erosion and spotty discoloration.

Both the frieze board and cornice overhang show areas of slight to severe deterioration requiring some detailed repairwork (see illustration 5). The first floor stucco wall finish shows only minor indications of weathering due in part to the porch roof's protective covering.

Within the stuccoed facade are minor but visible stress cracks that are typical of any applied cement-base finish. The cracks present no immediate threat to the building's appearance.

There is evidence that an enclosed porch segment stood at the eastern end of the existing porch area. This analysis is supported by the physical imprint of the vertical framing members within the stucco finish, both at the wall and at the two most eastern columns.

The porch's rustic wood handrails and balusters are in fair to poor condition. However, a number of the balusters are beginning to show adverse signs of weathering and aging (i.e. shrinkage, splitting, and some checking). Several of the remaining balusters are not securely in place and could loosen to the point of falling from their aligned positions. Both stair handrails are deteriorating rapidly and their supporting balusters and posts are showing indications of decay.

The porch's concrete floor slab and foundation walls are actively deteriorating. There is evidence of differential settlement beneath the slab, resulting in isolated areas of extensive cracking and changes in surface pitch. This lends itself to the collection and retention of surface water on the slab, which accelerates the effects of freeze-thaw cycling. Extensive spalling is visible along the face of the parged stone foundation stem walls with the most obvious damage occurring at the porch corners. Evidence of cracking and crazing is found over all formed or pargeted surface areas of the porch, including both concrete stair accesses.

Windows and doors are addressed in a follow-up section under the heading of "Windows and Doors."

Recommendations. Condition 1: Entails the retention of the original stucco finish with both main and side porch components remaining intact. More specifically the house's south facade is relatively stable; however, there are some specific areas of concern. These include repairing isolated segments of frieze board with treated lumber, and restoring eave cornice features to fully reveal the ornate detailing that only extends along this elevation.

Some of the wood porch handrails and balusters require both a brush treatment of preservative and reanchorage to their supporting members. A few of the rustic limb balusters need replacing with new units matching length, diameter, and surface appearance of existing. The main stair handrail should be replaced with new treated material matching the previous members in terms of length, diameter, and surface appearance.

Recommended treatment of the porch entails reconstructing the porch slab, stem wall, and stair access, duplicating style and mass of those elements to be replaced. Further commentary is in appendix A.

Other required repairs: reinstalling a continuous half-round gutter and connecting downspouts and the introduction of grade implanted splashblocks to improve drainage. There is no need to modify the existing grade along this elevation to enhance surface drainage.

Condition 2: Entails the removal of all the stucco finish material exposing the earlier clapboard layer; the removal of the fame kitchen porch; the repair or replacement of the existing deteriorated clapboard, and if need be, small portions of the supporting wall framing system. All other recommendations coincide with Condition 1 recommendations.

East Elevation

Updated Existing Conditions. There is a noticeable water moisture retention area along the gabled rake cornice extending downward toward both window heads. This has produced a confined pattern of crazing within the detailed stucco area (see illustration 2). This condition could eventually jeopardize the structural bonding of the stucco, particularly along the quasi-soffited portion of the rake cornice. There are other visible cracks in the stuccoed facade. However, there is no imminent probability of the stucco veneer releasing and falling. Both cornice returns on this elevation are missing.

The east facing kitchen porch, common to this elevation, has been changed from a closed-in screen porch to a rather vernacular open configuration (see illustration 2). Although atypically framed, the porch appears to be structurally stable. The only evidence of deterioration is found within the transversely laid tongue and groove floorboards along the extreme outside edges of the porch's shorter ends. The porch's access stair has both wood and concrete treads and risers. Both materials indicate moderate effects of weathering, however, they remain serviceable with only minimal spalling on the concrete surfaces.

There are some widely dispersed areas of stucco or mortar deterioration but none are significant. The basement bulkhead entry, including its double doors with a single hasp lock, is in excellent condition. Existing grade slopes downward away from the building.

All windows and doors with the exception of the bulkhead door are addressed in section "Windows and Doors."

Recommendations. Condition 1: Although this specific elevation has no major facade impacts, the stuccoed rake cornice does present some problems. Initial demolition of the rake cornice and the cement pargeted cap/parapet board may be required. Repair of the substrate, to include all damaged framing, and the repair of the adjacent roof components, would follow.

Finally, new stucco would be applied to areas of repair with all detailing reflecting its existing condition with special emphasis placed on a new flashing detail designed to preclude moisture migration beneath the pargeted parapet feature. There is an additional need to replace both moulded wood cornice returns with treated material shaped in the image of the missing features. As a Condition 1 requirement, the facade would be repaired and restuccoed as needed.

The east porch components need little attention. However, several floorboards should be replaced with treated stock tongue and groove decking lumber. New porch decking will be painted to match the existing color. There is no need to alter existing grade because it is pitched adequately to ensure positive drainage.

Condition 2: (same as Condition 2--South Elevation)

North Elevation

Updated Existing Condition. A cursory examination of this stuccoed fenestration reveals some cracking, although the pargeting remains firmly bonded to the wire mesh backing (see illustration 3). There are significant moisture problems that entail the effects of grade entrapment, rising damp, and rainwater splash-back. Each of the previously mentioned impacts could affect the structural integrity of the historic

clapboard and the supportive wall and sill plate system beneath the moisture-laden cement stucco.

The main cornice contains two problem areas at the opposite ends of this elevation. Roof configuration and prevailing winds contribute to the detrimental impact on these areas. Spot deterioration is due primarily to the channelization and absorption effects of the targeted rake capboards. Moisture entrapment occurs at the lower end of these capboards, thus making the architectural elements directly beneath the parapet's drip edge vulnerable to deterioration.

Moisture is also being trapped and held at the point of tangency where the projecting chimney is in contact with the kitchen's north wall. It is at these two inside corners that movement of the chimney mass is most apparent. Indications are that the movement remains active. The void being created by this rotational movement of the chimney mass away from the kitchen's wall plane collects and retains water between the masonry stack and the frame wall. There is a danger that the chimney column might collapse. This is a potentially serious hazard.

Another critical problem is the entrapment of moisture primarily along the grade line of the main body of the house. This condition is directly impacting the stucco finish, the historic clapboard substrate, and the wall's structural framing members (i.e. rough cut tenoned studs and the square-sectioned timber sill plate). This problem is caused by the lack of positive drainage in and around the north elevation. Essentially, the house is functioning as an inhibitor to the natural dynamics of both surface and subsurface drainage.

Site hydrology is a major concern that needs to be resolved in the immediate future.

All windows and doors are addressed in another section, "Windows and Doors."

Recommendations. Condition 1: Those portions of stuccoed fenestration that have been impacted by moisture retention need replacing. Extant water staining detracts from the building's appearance. Cracks found only in the stuccoed surface of the house's main body do not have structural implications and, therefore, are not an urgent concern. However, they are unattractive. In contrast, the cracking evident in the fenestration of the kitchen ell is indicative of structural instability within the chimney's masonry mass. Reconstruction of the chimney mass, including the introduction of a new reinforced concrete footing, is probably required. Repairs to the substrates would be made, followed by a reapplication of finish stucco. Further analysis of this problem and suggested solutions can be found in appendix A. Grade alteration is required to preclude surface water from collecting against the foundation and being absorbed through capillary action into the lower portions of the stuccoed surfaces. More specifically, and of possibly greater impact, is the problem of surface water being held against the foundation of the main body of the house. This localizes that water in direct proximity to the major timber sill plate. Water is then absorbed by the timber member and provides a harbor where microbes can attack the wood and accelerate deterioration. Coupled with the typical wet-dry cycling, this condition has obviously had an adverse affect upon this structurally important member.

Repairs could take the form of either total replacement or the more limited scope of epoxy consolidation. In fact, both methods could be used depending on location and size of the impacted areas.

Significant water problems also extend to the basement area where the interior north foundation wall is composed of exposed shale strata. This condition allows a free flow of water to penetrate into the structure and creates a perpetually damp environment. Such a condition over an extended period of time could lead to more complicated impacts upon the structure and more specifically to the first floor framing system. Subsurface hydrostatic pressure and surface runoff with their specific implications are discussed in depth in appendix A.

Regrading should take the form of a newly profiled swale that extends the full length of the structure and runs relatively parallel to the north elevation. This swale alignment would provide positive drainage away from the building's face as well as rechannel surface runoff from the hillside above into a predetermined collection area away from the building's footprint. Additional commentary concerning site drainage impacts can be found in appendix A.

Consideration should be given to not only reinstalling a continuous half-round gutter and connecting downspouts at the main eave, but also to include the introduction of a new half-round gutter along the kitchen ell's eave.

Condition 2: (same as Condition 2--South Elevation)

West Elevation

Updated Existing Conditions. On this particular elevation, which includes both the kitchen ell and the main house body, there are areas that reveal extensive stucco and substrate deterioration. Evidence of damage is most noticeable along the rake cornice, the cornice return at the eaveline, the wall spandrel areas, and the foundation's stuccoed face along the entire breadth of the elevation (see illustration 4). These problem areas are either defined by water-stained areas within the stucco finish, fracture lines throughout the stuccoed fenestration, and/or voided areas found in the stuccoed surface that leave the substrate materials exposed directly to all the adverse effects of severe weathering. To elaborate, staining obviously indicates periodic water retention that is not only impacting the surface materials but also the substrate beneath it. Fracturing is the end result of climatic impacts that over a period of time could have structural failure implications. Isolated areas where these surface finish failures have occurred afford the weather an opportunity to penetrate into the interior layers of the structure's cladding where moisture and its byproducts could affect the house's framing system.

Grading along the elevation does accommodate positive drainage away from the building's foundation, but only to a minimal extent.

Recommendations. Condition 1: The degree of stucco imperfections, whether it be at the rake cornice, spandrel areas, or along the foundation and grade lines, warrants complete replacement. Selective demolition followed by replacement patching would result in a fenestration composed of irregular contrasting finishes not unlike an asymmetrical patchwork quilt. The potential for creating such an adverse visual impact could prompt a decision for the complete removal and subsequent reapplication of a new cement stucco surface. This would be the general scenario if a decision were made to retain the building's existing fenestration, thus meeting the criteria of Condition 1. Installation of an underground power supply cable would allow the removal of the existing aerial link and the wall-mounted electric meter therefore enhancing the facade's appearance.

Both eave cornice returns need to be replaced in a manner that reflects their original appearance.

Although positive drainage occurs along this facade, it should be improved at the kitchen ell's west elevation. This could be accomplished by introducing a drainage swale paralleling the kitchen's west elevation that ties perpendicularly into the new primary east-west drainage swale.

Condition 2: (same as Condition 2--South Elevation)

Windows and Doors

General Updated Existing Condition. All wood windows and doors show signs of moderate weathering (see illustration 4). On certain elevations of the house, these weather impacts are more pronounced. The facade with the most window deterioration is the west elevation. The greater impacts are found in the window casements and more specifically the sill

and sub-sill members. Moisture retention leading to the sill's demise has also extended to the baserails of bottom sashes that rest upon them. There is general evidence of muntin and meeting rail decay, yet this condition is restricted to only a few sash units. Likewise, the door openings have experienced similar weathering impacts, especially along the west and north elevations. Both casement components (i.e. sills and jambs) and door components (i.e. rails, stiles, and panels) have sustained the greatest impact due to the harsh weather cycling that is common to this region. Other elements sustaining damage are the glazing putty and the smaller pieces of sash and casement components. Although examination was cursory, most windows and door heads appear to be in good condition and would require only limited preservation attention.

Paint currently covering the surfaces of these windows and doors has deteriorated through the processes of chalking, alligatoring, peeling, or a combination of the above.

General Recommendations. Restorative treatment of all wood components would take the form of general refinishing and repainting. Specific carpentry items require total or partial replacement. Replacement items would be of treated millwork profiled and painted to match existing components.

Generally, repair measures entail scraping, priming, reglazing, and replacing those items requiring restoration.

BUILDING CONSTRUCTION ANALYSIS

This section confirms some previous analysis from the Batcheler report and also describes additional new information uncovered in this investigation.

Current physical documentation indicates precisely that the Pipher farmhouse was built in 1833. Architecturally this date is supported by

the style, type, and application of building materials used in assembling the structure. The construction sequence of individual building components is easily discernable except for the northeast ell. Although there is some speculation that the northeast ell was a kitchen addition constructed some 8 to 10 years after the completion of the main house body, fabric analysis revealed that the kitchen ell was built concurrently with the main house body. The kitchen ell was a two-story framework system covered by a shed roof sloping downward east to west. Other comparative data previously gathered supports the probable existence of an open porch element adjoining the west elevation of the original kitchen ell. The presence of such an element is unsubstantiated to date. Further destructive investigation is required to verify its historic existence.

The most supportive evidence of the former two-story configuration was found in the kitchen attic. The attic's south wall, which would have been an exterior clapboard wall, shows no evidence of nail holes or horizontal indentations indicating previously attached clapboard. This same wall surface as seen from the attic space is covered entirely with whitewash.

Indications are that this was the original surface treatment for this wall area, thus confirming that it has always been an interior wall surface. Also obtained from the outline of the whitewash applications was the historic roof pitch of the original northeast ell (see figure 1, pg. 133).

The existing stair access to the main house attic was not an original feature of the farmhouse. This is confirmed by the existence of stub joist pieces that were obviously a part of the original framing members supporting the attic floor (see figure 2, p. 134). During stairway construction, the original full-spanning joists were cut to accommodate the new stair clearances, thus leaving the remnant stub joists extending slightly into the new stairwell opening. The date when this modification was undertaken is unknown, but this alteration does not contribute significantly to the history of the house.

The original access to the attic could have been a typical skuttle hole with a hatch closure. Any form of fabric evidence to either confirm or deny this probable arrangement was destroyed at the time when the new stairway was installed.

ENERGY CONSERVATION ANALYSIS

Farmhouse

Several actions could be implemented to enhance the energy efficiency of the farmhouse. These include: placing of new insulation within the attic floor framing system; utilization of energy efficient interior and exterior lighting fixtures; installation of a low-wattage, high efficiency BTU output heating source (single unit or multiple-unit system); and preparation of a life cycle analysis of available fuels in order to obtain optimal energy conservation with the final selection.

Ancillary Structures

All other structures on-site will remain without any anticipated need of environmental control systems.

HANDICAPPED ACCESS ANALYSIS

Farmhouse

Current access is accomplished by way of three stairs. Two concrete stairs work in conjunction with the south concrete main porch. The third wood stair is part of a wood framed porch that communicates with the kitchen addition along that portion of the east elevation. The elevation differences from grade are significant at the main porch, but are considerably less at the kitchen porch. The concrete stair at the west

end of the main porch could accommodate a ramp without excessive visual intrusion and allow the visitor to enter the house through the main entry door and hallway. A ramp placed here would also comfortably tie into the proposed pathway leading from the new parking area to the Slateford Farm complex.

Rear egress from the structure may be deemed essential to minimize circulation conflicts. Such egress could be accomplished by extending a ramp from the northern end of the porch down to grade, thereby maintaining an unobtrusive alignment with the kitchen's facade. Another option would be to reaccess the west kitchen door that exits directly to grade. This would preclude the need of introducing a visually intrusive access aid (i.e. ramp or chairlift). However, visitation projections, especially to this rather remote site, may be limited in numbers; therefore, only a single exterior H/C entry/egress opening could satisfy the need for barrier-free accessibility within and around the farmhouse.

Interior accessibility between first and second floors could be facilitated by the installation of a chairlift. This would obviously impact the visual integrity of the classical central stair because it is the only access to the second floor. The problem of accessibility also extends to the basement floor level. This level is only accessible by stairs (one internal and the other external), thus precluding easy access to the lower rooms. Head clearance at this level is also a major encumbrance and presents a hazard that probably should be avoided (see illustration 8). Depending on how the park staff elects to interpret the house, public access, and more specifically handicapped access, could be restricted to the first floor only. Accessibility throughout the first floor level is unobstructed. Both the communicating level wood floor and the jamb widths of room openings adequately accommodate both wheelchair and foot circulation. Serious consideration should be given to the concept of limiting public access to the first floor areas only as previously described.

Ancillary Structures

Accessibility to the interior of these structures would be limited at best. The need for such accessibility depends upon how the park staff chooses to interpret these structures. A provision is being made to augment the existing pathways with new accessible interpretive tour paths. These will weave throughout the site interconnecting the various points of interest (see illustration 10). As a further reference, a landscape analysis is included as appendix D.

SPECIFIC CODE ANALYSIS

The Slateford complex is a federally-owned property that falls under the care and jurisdiction of the National Park Service. NPS Management Policies state that "every attempt shall be made to comply with local building and fire codes, to cooperate with local officials and to provide protection from lightning."¹ These provisions are the more general guidelines while the specifics are defined by the Life Safety Code² and the Commonwealth of Pennsylvania State Building Code.³

The critical issue of the farmhouse's accessibility is addressed in this report under "Handicapped Access Analysis."

GENERAL COMPLIANCE

The Slateford Farm complex is under reevaluation for listing on the National Register of Historic Places. The nomination form has been

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1. NPS Management Policies, p. V-26.
 2. Life Safety Code, NFPA, 101, Chapter 5.
 3. State Building Code, The Commonwealth of Pennsylvania.

completed and submitted to the Pennsylvania State Historic Preservation Officer for review and comments. Additional discussions with this office are pending.

The enabling act for Delaware Water Gap National Recreation Area in 1968 stated that the park was created primarily for recreational purposes. However, a secondary purpose involved the "preservation of the scenic, scientific and historic features contributing to public enjoyment of such lands and waters. . . ." This mandated statement specifically applies to the Slateford Farm complex, which affords the visitor the experience of farm life in 19th century Pennsylvania and early technology of the slate industry in Northhampton County. More specifically, the existing General Management Plan, May 1987, indicates that the Slateford complex lends itself more comfortably to a time-continuum interpretive approach, thus precluding major modification impacts. It continues in this light to function as a interpretive focal point of the park.

An Assessment of Effect (XXX) form would be prepared to cover compliance relating to actions specifically pertaining to preservation maintenance. The General Management Plan calls for preservation of interior and exterior fabric. Changes from this general treatment level and use for interpretation or information would require additional 106 review.

Prior to construction, a qualified professional archeologist will inspect the ground surface of the area for the presence of prehistoric and historic cultural remains. Site evaluation and additional investigations will be accomplished prior to earth-disturbing activities. If subsurface remains appear likely, an archeologist will be on-site to monitor land-disturbing actions.

OVERVIEW OF FARMHOUSE ENGINEERING SYSTEMS

Preface

This section will be devoted to a general summary of the farmhouse's internal support systems. Contents will be a brief yet comprehensive look at all the engineering requirements and how each might be applicable to future needs of the farmhouse.

Sanitary System

With the existence of deactivated toilet facilities (single water closet, bathtub, and lavatory) on the second floor, Room 205, the park is again considering making these in-place fixtures serviceable (see illustration 9). If this were undertaken, the handling of the resultant effluent could not only impact the interior of the farmhouse but also the surrounding landscape. Issues to be considered would be what source of water to use and how to convey it to the site, and how to deal with the disposal of the generated effluent. Pending any future demolition or augmentive modifications to the existing systems or installation of totally new systems, the need for archeological preparatory clearances and site monitoring arrangements is essential to meeting compliance regulations. Recommendations concerning these matters can be found in appendix C.

Electrical System

The house is currently being supplied with 120/240 volt service, which is adequate to support the minimum number of fixtures and the non-comprehensive single contact security system presently in place. Some of the existing circuits have been disconnected and those portions of exposed conduit reflect a state of disrepair that could present a potential fire hazard (see illustration 8). Scope of electrical renovation will be dependent upon selected treatment alternatives. More exclusive commentary can be found in appendix B.

Mechanical System

The farmhouse is not presently equipped to provide dehumidification, heating, ventilating, or air-conditioning to its interior spaces. Once again contingent upon pending treatment alternative selections, the incorporation of any one or all of these systems might be required. If the farmhouse is to contain furnishings or displayed artifacts in general, then it will be imperative to provide essential dehumidification along with year-round ambient temperature maintenance to ensure preservation of all artifacts on display. Regardless of scope of restoration or extent of visitor use, it would be prudent to provide some form of a moderate heat source for the winter months and the cooler nights experienced in both the early spring and late fall. The transitional seasons, being moderate, pose little impact to the internal historic fabric. As an energy-efficient alternative, during summer months it might be possible to shut down the dehumidification system and ventilate with convected outside air. This alternative arrangement on occasion might require a supplemental boost with portable fans to aid in the circulation of stagnant air.

Currently, fire protection is being provided by conveniently placed hand-held type "C" portable extinguishers. In the anticipation of future expanded use of the farmhouse both in terms of quality furnishings and additional visitor activity, it might warrant consideration for an automated fire suppression system. In this instance, probably a residential-type sprinkler system would satisfy such a need. This system would be married with an ionization or photo-electric fire detection system as an economically viable provision for full and comprehensive fire protection coverage.

Please note that a mechanical analysis section will not be incorporated at this time, but will be added as an addendum at a later date.

Plumbing fixtures are in place; however, if activated, the existing discharge piping would need to be pressure tested to ensure serviceability. Coordination between the mechanical and sanitary

engineers would be essential in designing an overall efficient system with minimal impact to the site's historic and natural resources.

To mitigate any related ground-disturbing activities, it will be necessary to have an archeologist present on site for the purpose of monitoring such activities.

Structural System

The issues relating to the scope of structural impacts have been previously addressed under the headings of "Existing Condition of Farmhouse - South, East, North, and West Elevation" narratives and their recommendation sections. Specific structural references can be found in appendix A.

ANCILLARY BUILDING ANALYSES

Woodshed

Updated General Existing Conditions. Structurally and architecturally this composite building is in poor condition. Both the slate shingles and the log rafter framing on the adjoining rectilinear gable roofed units show evidence of deterioration. The existing vertical board and bark scab siding reflects the adverse effect of age and weather exposure (see illustration 13). Portions have rotted to leave gaping holes in the building's fenestration. Some of the layered siding in semi-protected areas remain intact, although these areas are also undergoing some form of accelerated deterioration. Causes of deterioration range from microbiological attack and insect infestation to occasional vandalism.

The rubble stone foundation has suffered greatly from the effects of frost heave. Large voids, primarily along the south elevation, have been created by the dynamics of this action (see illustration 12). Drainage patterns along the north elevation are causing some structural problems.

Recommendations. This structure requires general stabilization. Immediate attention needs to be given to the roof, where all of the sheathing is in an advanced state of deterioration and where most of the slate shingles show evidence of crazing, cracking, and delamination. Wall sheathing of the eastern unit of this composite shell is in fair condition primarily due to the protective nature of the layered exterior clapboard. Some of this horizontal clapboard needs replacing. Both door and window hardware require reconditioning as well as some replacement.

Some existing floorboards need replacing and all remaining planking should be treated with an application of brush-on preservative.

Structurally, several significant support members need replacing or consolidation. Those that require total or partial replacement include the two missing corner post timbers, a portion of the top plate timber, fifteen cross tie timbers, eight knee brace members, and a segment of the timber sill beam containing the scarf joint. Some of the least deteriorated members might be salvaged by consolidation using epoxy resin impregnation.

Finally, the existing grading along the north elevation needs to be altered to provide positive drainage away from the building's facade. Two supplemental diversionary swales paralleling each transverse end need to be feathered into natural drainage patterns that fall below the building's footprint.

Additional structural assessment of this specific building may be found in the structural analysis section, appendix A.

Springhouse

Updated Existing General Conditions. Although most of this building's deficiencies are structural, there are also some architectural problems (see illustration 14). The roof and pre-cast concrete ridge cap are showing the effects of aging. There are mortarless head and bedding

joints within the masonry walls, and in general all pointing is either spalled or cracked.

The intermediate masonry wall (mortared field stone) that separates the deep water trough room from the larger shallow water trough room shows extensive cracking throughout the wall's mass. There is a rather noticeable bulge extending into the smaller room and the wall shows signs of collapse. The probable cause appears to be some form of foundation failure. An impact affecting the foundation may be the presence of a spring runoff channel that flows adjacent to the building's east elevation at fluctuating seasonal depths and rates. There is presently a non-historic concrete floor slab in place showing evidence of uplifting and general stress cracking that could be related to the intermediate wall movement.

The whitewash coating used as a finish treatment is now chipped and alligatored on all exterior surfaces. Rising damp at the base of the walls has contributed to this condition. All finish carpentry elements (i.e. door and window heads and jambs, and batten door and single fixed lite sash) require attention. Some of the rough framing members have decayed enough to have lost their structural integrity.

Both the rough timber top plates and the adjoining half-log rafters have suffered from prolonged exposure to moisture. One rafter member has completely rotted through and is being held in place by the attached sheathing. The notched top plate has also undergone general decomposition, especially around the rafter seats. The rafter spacing, given the relative size of each existing half-log rafter, is probably inadequate to carry current regional design criteria snow loads.

General Recommendations. Structural stabilization is of the utmost importance. New companion treated rafters need to be installed and the existing roof sheathing needs to be replaced. These companion rafters should be of treated dressed lumber appropriately marked to indicate date of installation. Resecuring of loosened, intact slate shingles and

replacement of broken and cracked slate units is also required. The intermediate masonry wall also needs to be stabilized. The wall should be monitored with tilt sensors to determine if the wall is still undergoing a buckling action. If movement is still occurring, shoring should be installed to prevent the wall from failing.

General repointing of exterior walls is required along with exterior and interior whitewash applications. All existing door and window hardware needs reconditioning and those missing hardware components need replacement. A new board and batten door needs to be fabricated with treated material for the west elevation opening.

Regrading is necessary along the north and west elevations of the building to divert both ground and surface water away from the building footprint. A perimeter drain system could be developed. Environmental impacts would be assessed before such action is initiated.

Additional structural assessment of this specific building may be found in the structural analysis section, appendix A.

Slate Shanty

Updated General Existing Conditions. This building is used as a seasonal interpretive facility and has received some cyclical maintenance over the years. The building has a new slate roof that is essentially intact (see illustration 15). The roof framing system is probably deficient in meeting current code snow load requirements. Some of the existing sheathing along the stub eaves should be replaced with treated material.

The heavy timber wall framing members are in relatively good condition, however, a thorough application of brush-on preservative would be required. Two rotted and partially severed sill beams need to be replaced. The exterior vertical board and batten wall cladding including both the double leaf and single leaf vertical board and batten window

shutters fall in an area ranging from fair to poor condition. Boards covering the upper half of the building are generally in better condition than those covering the lower half. This remains true on all elevations except the west facade, where all of the cladding needs to be replaced.

The existing foundation is only comprised of four corner slate slab-stone piers. These slate piers require some form of stabilization to ensure adequate bearing capability.

Surface drainage does present a slight problem along the northern elevation of the building.

Recommendations. Necessary roof repairs include some shingle replacement as well as the resecuring of several upper course rows of slate shingles to newly patched-in, treated roof sheathing. Portions of existing roof sheathing need to be replaced with new treated materials, particularly along the eave and rake driplines. Treated supplemental nominal size rafter members need to be added to comply with local building code snow load requirements.

New treated lumber is needed to replace areas of deteriorated vertical board and batten siding. These areas are primarily restricted to the lower half of three sides and all of the remaining fourth side (west elevation). Existing board and batten door and window closures need a series of penetrating brush-on preservative treatments. One new board and batten door needs to be fabricated with treated lumber to replace the deteriorated west elevation door. All shutter and door hardware require general reconditioning. This task may be complemented by partial disposal of old unusable components and selective substitution with new components.

The existing slabbed-slate foundation piers would either require the addition of new intermediate perimeter supports or the supplemental enlargement of the surface bearing area of each individual existing corner pier. Measures must be taken to preserve the general appearance of this building by minimizing the visual effects of foundation modification.

Existing topography is not a major concern, although it would be prudent to preclude the migration of surface runoff beneath the structure's footprint by introducing a shallow drainage swale away from and parallel to the building's north elevation.

Additional structural assessment of this specific building may be found in the structural analysis section, appendix A.

Cabin

Updated Existing Conditions. This building was comprehensively stabilized several years ago. There are several loose, cracked and broken slate shingles, and the pre-cast concrete ridge comb contains several spalled and cracked units.

Structurally, the building appears sound (see illustration 11). Roof, wall, and floor framing, clapboard siding, finish carpentry items (i.e. window and door closures) and newly pointed stone foundation are all in excellent condition. However, the existing drainage pattern dictated by the site's topography does impact the building's north elevation.

Recommendations. Only minor repairs are needed to make the roof weathertight. Essentially the replacement of broken or cracked slate shingles along with re-casting and installing the replacement modular concrete ridge combs would complete the restoration of the roof area. The remaining building areas require no further attention with the exception of the existing grade along the north side of the cabin. Here, water needs to be channeled away from the foundation and the vulnerable adjacent timber sill plate. The introduction of a new drainage swale would resolve this problem.

Additional structural assessment of this specific building may be found in the structural analysis section, appendix A.

EXISTING CONDITIONS PHOTOGRAPHS

Illustration 1. South Elevation - Main House. Denver Service Center
Photo, 1985.

Illustration 2. East Elevation - Main House. Denver Service Center
Photo, 1985.



Illustration 3. North Elevation and attached Kitchen Ell-Main House. Denver Service Center Photo, 1985.

Illustration 4. West and South Elevations - Main House. Denver Service Center Photo, 1985.



Illustration 5. Cement Parged Rake Parapet - Main House. Denver Service Center Photo, 1985.

Illustration 6. Rafter Connection at Ridge - Main House. Denver Service Center Photo, 1985.



Illustration 7. Roof Crib Framing in Attic - Main House. Denver Service Center Photo, 1985

Illustration 8. Basement, Room 002 - Main House. Denver Service Center Photo, 1985.



Illustration 9. Bathroom, Room 205 - Main House. Denver Service Center Photo, 1985.

Illustration 10. Ancillary Building and Kitchen Ell - Main House. Denver Service Center Photo, 1985.



Illustration 11. West Elevation - Cabin. Denver Service Center Photo, 1985.

Illustration 12. South Elevation - Woodshed. Denver Service Center Photo, 1985.



Illustration 13. West Elevation - Woodshed. Denver Service Center
Photo, 1985.

Illustration 14. West and North Elevations - Springhouse. Denver
Service Center Photo, 1985.



Illustration 15. West Elevation - Slate Shanty. Denver Service Center
Photo, 1985.



HISTORIC PHOTOGRAPHS

Illustration 16. Slateford Farm, Circa 1935. Charlotte Cyr Jewell Collection.



Illustration 17. Slateford Farm, Circa 1950. Charlotte Cyr Jewell Collection.

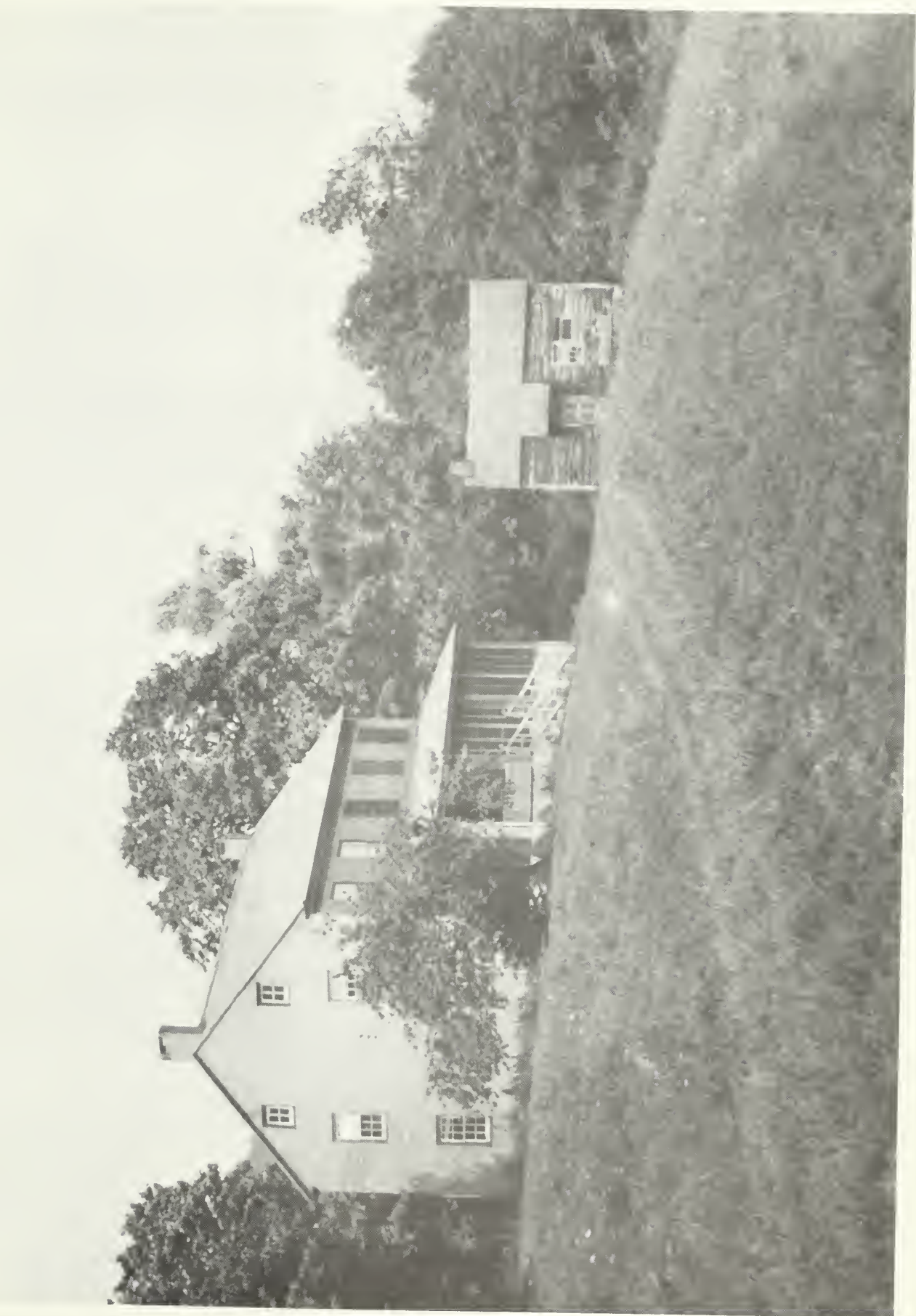


Illustration 18. Louis Cyr on Slateford Farmhouse South Porch, Circa 1930.
Charlotte Cyr Jewell Collection.



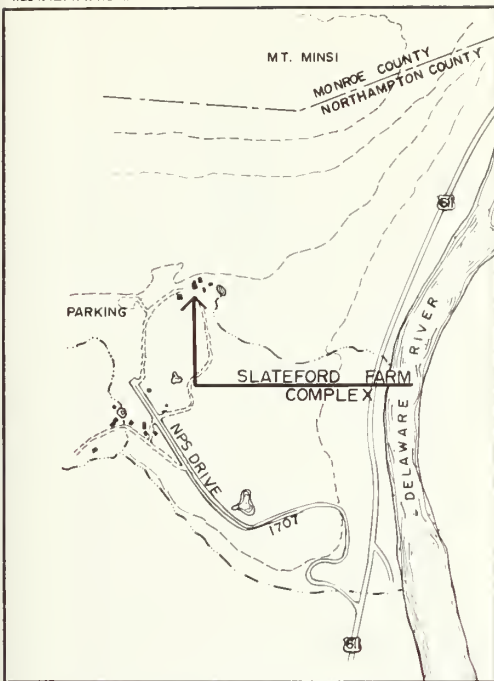
Illustration 19. Louis Cyr and Frank Munsch in front of East Elevation of Farmhouse, 1949-1950. Charlotte Cyr Jewell Collection.



Illustration 20. Woodshed - West Elevation, Slateford Farm Complex,
Circa 1940-1950. Charlotte Cyr Jewell Collection.

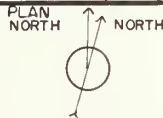


EXISTING CONDITION DRAWINGS



SLATEFORD FARM
COMPLEX

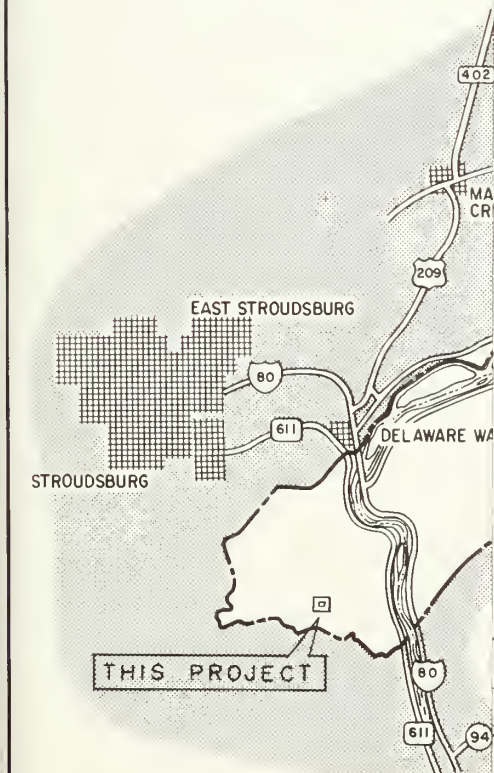
LOCATION MAP
NO SCALE



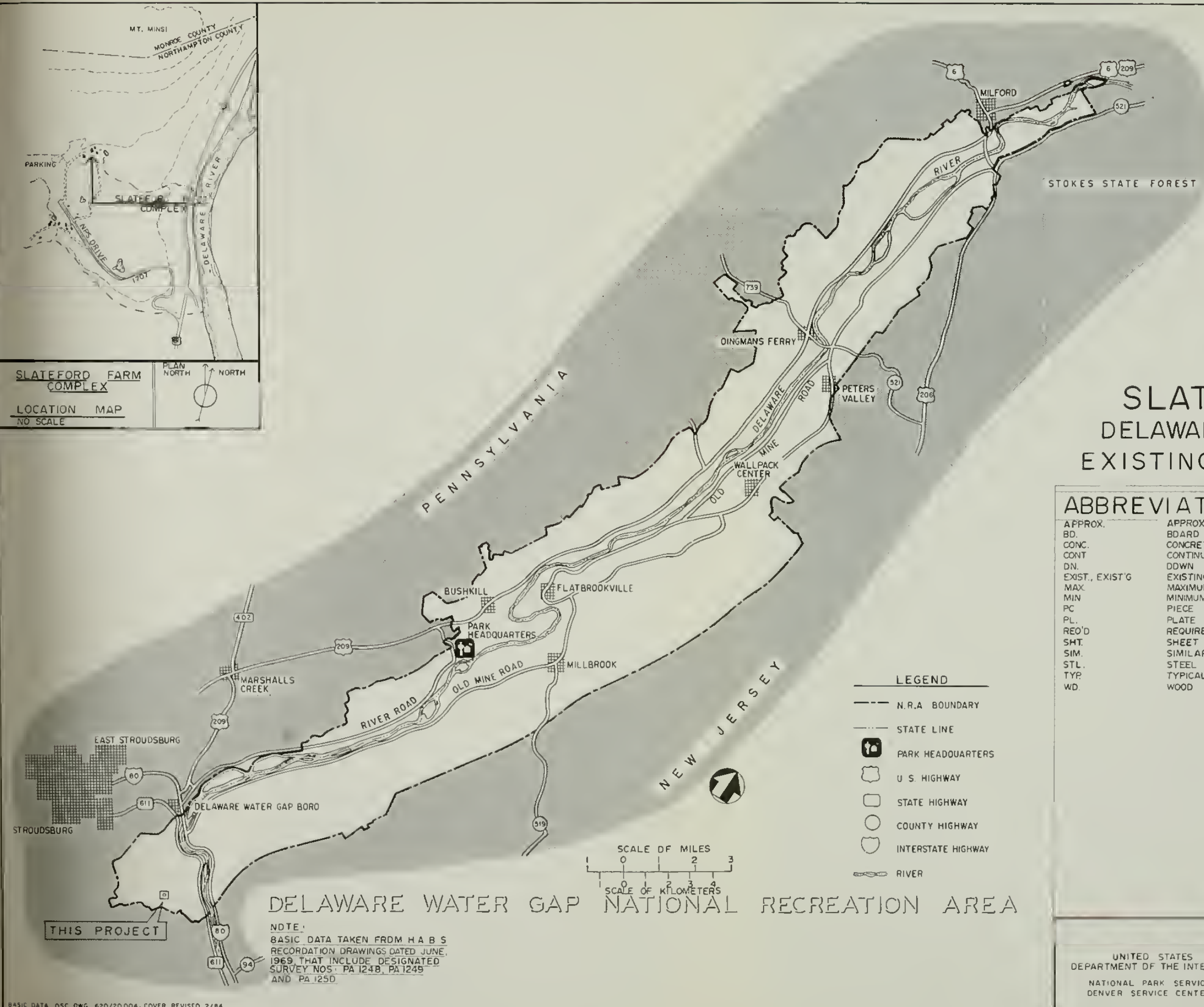
SLATEFORD FARM DELAWARE WATER GAP N.R.A. CONDITION DRAWINGS

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- 1 COVER SHEET
- 2 SITE PLAN - SLATEFORD FARM COMPLEX
FARMHOUSE
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- 5 FIRST FLOOR PLAN
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- 12 TRANSVERSE SECTION
- 13 LONGITUDINAL SECTION
- 14 FIRST FLOOR FRAMING PLAN & DETAILS
- 15 SECOND FLOOR FRAMING PLAN & DETAILS
- 16 ROOF FRAMING PLAN
- 17 MISCELLANEOUS DETAILS
- 18 MOLDING PROFILE
- 19 INFORMATIONAL DIVIDER
- 20 FLOOR & ROOF PLANS
- 21 ELEVATIONS
- 22 SECTIONS
- 23 INFORMATIONAL DIVIDER
- 24 PLAN, ELEVATIONS & SECTIONS
WOODSHED
- 25 INFORMATIONAL DIVIDER
- 26 PLAN, ELEVATIONS & SECTION
SPRINGHOUSE
- 27 INFORMATIONAL DIVIDER
- 28 PLANS & SECTION
SLATE SHANTY
- 29 ELEVATIONS



DESIGNED EXISTING	TITLE OF DRAWING EXISTING CONDITION DRAWING	DRAWING NO 620
DRAWN camarena	LOCATION WITHIN PARK SLATEFORD FARM	PKG NO 111
TECH REVIEW TECH REVIEW	NAME OF PARK DELAWARE WATER GAP	SHEET 1
DATE DEC /85	COUNTY NORTHAMPTON	STATE PA
	REGION MID-ATLANTIC	OF 29



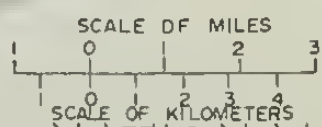
SLATEFORD FARM
DELAWARE WATER GAP N.R.A.
EXISTING CONDITION DRAWINGS

ABBREVIATIONS DRAWING INDEX

APPROX.	APPROXIMATE
BD.	BOARD
CONC.	CONCRETE
CONT	CONTINUOUS
DN.	DOWN
EXIST., EXIST'G	EXISTING
MAX.	MAXIMUM
MIN.	MINIMUM
PC	PIECE
PL.	PLATE
REQ'D	REQUIRED
SHT.	SHEET
SIM.	SIMILAR
STL.	STEEL
TYP.	TYPICAL
WD.	WOOD

1	COVER SHEET
2	SITE PLAN - SLATEFORD FARM COMPLEX
	FARMHOUSE
3	INFORMATIONAL DIVIDER
4	BASEMENT PLAN
5	FIRST FLOOR PLAN
6	SECOND FLOOR PLAN
7	GARRET FLOOR PLAN
8	SOUTH ELEVATION
9	EAST ELEVATION
10	NORTH ELEVATION
11	WEST ELEVATION
12	TRANSVERSE SECTION
13	LONGITUDINAL SECTION
14	FIRST FLOOR FRAMING PLAN & DETAILS
15	SECOND FLOOR FRAMING PLAN & DETAILS
16	ROOF FRAMING PLAN
17	MISCELLANEOUS DETAILS
18	MOLDING PROFILE
	WOODSHED
19	INFORMATIONAL DIVIDER
20	FLOOR & ROOF PLANS
21	ELEVATIONS
22	SECTIONS
	SPRINGHOUSE
23	INFORMATIONAL DIVIDER
24	PLAN, ELEVATIONS & SECTIONS
	SLATE SHANTY
25	INFORMATIONAL DIVIDER
26	PLAN, ELEVATIONS & SECTION
	CABIN
27	INFORMATIONAL DIVIDER
28	PLANS & SECTION
29	ELEVATIONS

LEGEND	
---	N.R.A. BOUNDARY
---	STATE LINE
	PARK HEADQUARTERS
	U.S. HIGHWAY
	STATE HIGHWAY
	COUNTY HIGHWAY
	INTERSTATE HIGHWAY
	RIVER

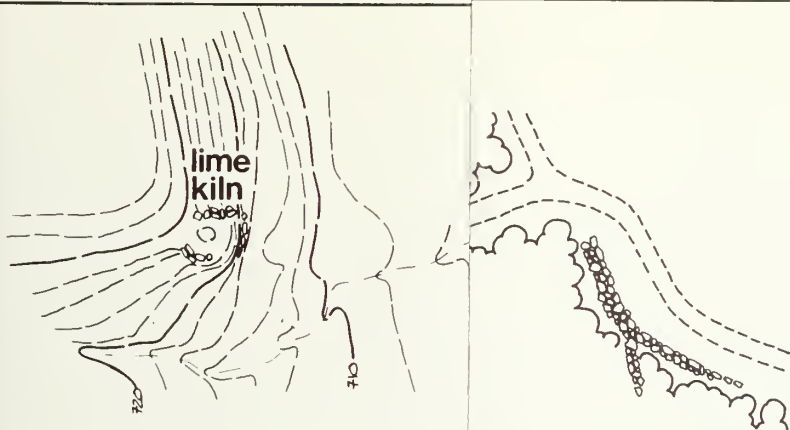


DELAWARE WATER GAP NATIONAL RECREATION AREA

NOTE:
BASIC DATA TAKEN FROM H A B S
RECORDATION DRAWINGS DATED JUNE,
1969 THAT INCLUDE DESIGNATED
SURVEY NOS. PA 1248, PA 1249
AND PA 1250

DESIGNED EXISTING	TITLE OF DRAWING EXISTING CONDITION DRAWING	DRAWING NO. 620
DRWN. camarena	LOCATION WITHIN PARK SLATEFORD FARM	25,012
TECH. REVIEW BENNETT	NAME OF PARK DELAWARE WATER GAP	PKG. NO. 111
DATE DEC /85	REGION MID-ATLANTIC	SHEET 1
	COUNTY NORTHAMPTON	OF 29
	STATE PA	

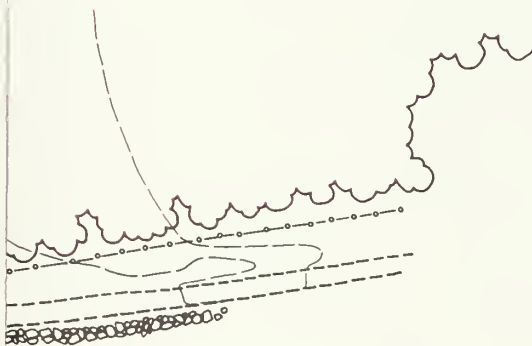
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DENVER SERVICE CENTER



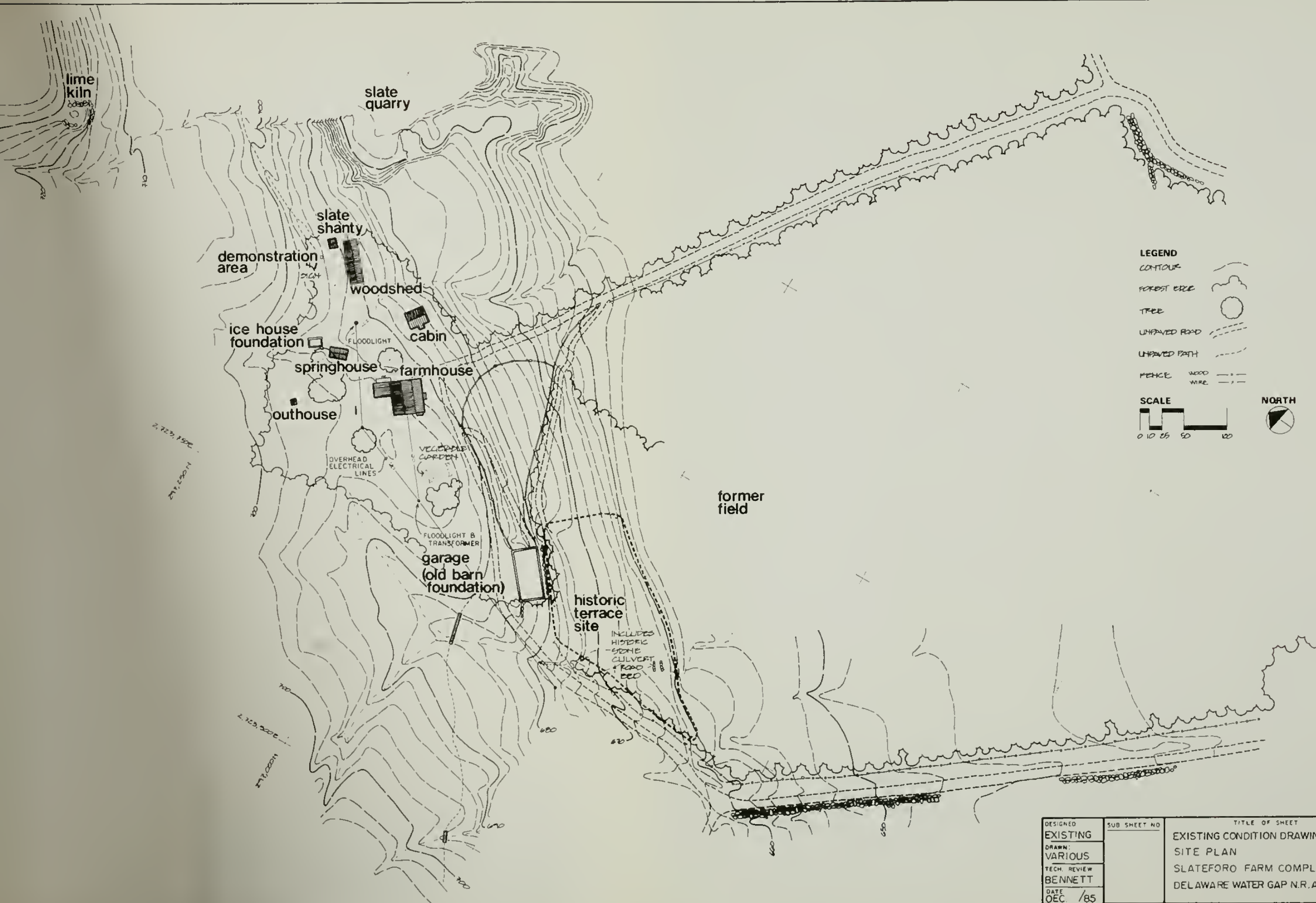
LEGEND



2, 723, 750
271, 250 N



D TING	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.
OUS		EXISTING CONDITION DRAWING	620
VIEW:		SITE PLAN	25,012
ETT		SLATEFORD FARM COMPLEX	PKG. NO. III
/85		DELAWARE WATER GAP N.R.A.	SHEET 2
			OF 29



LEGEND

CONTOUR

FOREST EDGE

TREE

UNPAVED ROAD

UNPAVED PATH

FENCE

WOOD

WIRE

SCALE

0 10 25 50 100

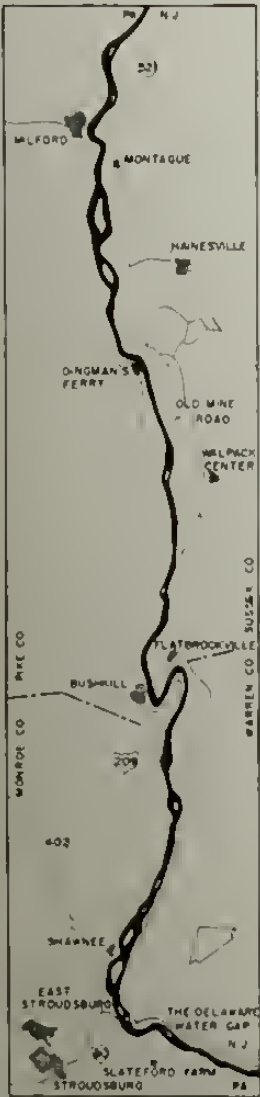
NORTH

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING SITE PLAN SLATEFORO FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012
DRAWN: VARIOUS			PKG. NO. 111
TECH. REVIEW BENNETT			SHEET 2
DATE DEC /85			OF 29

ED.	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
TING		EXISTING CONDITION DRAWING	620
IOUS		INFORMATIONAL DIVIDER	25,012
REVIEW:		SLATEFORD FARM COMPLEX	PKG. NO. III
NETT		DELAWARE WATER GAP N.R.A.	SHEET 3
/85			OF 29

SLATEFORD FARMHOUSE

THIS LARGE FRAME HOUSE APPEARS TO HAVE BEEN BUILT ABOUT 1830-1840. IT WAS STUCCOED DURING THE FIRST QUARTER OF THE 20th CENTURY AND A FRONT PORCH WAS ADDED. A HIGH VICTORIAN WAINSCOT WAS APPLIED TO WALLS OF THE WIDE CENTER HALL AND SEVERAL FIREPLACES WERE REMOVED. THE ORIGINAL STAIRWAY, OLD CHAIR RAILS AND SIX PANEL DOORS WITH ELBOW OR OPEN SPRING LATCHES REMAIN. MANTELS OF THREE CORNER FIREPLACES ARE ELABORATE VARIATIONS OF COUNTRY CARPENTER CARVINGS.



DELAWARE RIVER VALLEY

0 1 2 3 4 5 SCALE IN MILES



BUILDING KEY MAP

0 50 100 150
SCALE IN FEET
1" = 50'

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER SLATEFORD FARM COMPLEX DELAWARE WATER GAP N R A.	DRAWING NO. 620 25,012	
DRAWN VARIOUS			PKG. NO. III	SHEET 3
TECH. REVIEW BENNETT			OF 29	
DATE DEC /85				

D: TING OUS REVIEW: JETT /85	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
		EXISTING CONDITION DRAWING	620
		FARMHOUSE-BASEMENT FLOOR PLAN	25,012
		SLATEFORD FARM COMPLEX	PKG. NO. III SHEET 4 OF 29
		DELAWARE WATER GAP N.R.A.	

Architectural floor plan showing two main rooms, 001 and 002, and a staircase. The plan includes detailed dimensions for walls, openings, and overall footprint. A north arrow and a scale bar (1 inch = 10 feet) are provided.

Room 001 Dimensions:

- Overall width: 30'-3"
- Overall depth: 40'-4"
- Top wall: 1'-8" (left), 2'-7" (left), 2'-9" (left), 7'-4" (left), 1'-8" (left), 1'-4" (left), 2'-8" (left), 2'-0" (left), 11" (left), 4'-0" (left), 11'-9" (left), 1'-8" (left)
- Right wall: 3'-7" (top), 1'-8" (top), 3'-3" (top), 2'-9" (top), 3'-0" (middle), 40'-4" (bottom), 1'-8" (bottom)
- Bottom wall: 1'-8" (left), 7'-7" (left), 2'-9" (left), 1'-10" (left), 1'-11" (left), 7'-4" (left), 2'-11" (left), 2'-8" (left), 1'-8" (left)
- Internal dimensions: 13'-0" (width), 6'-0" (depth), 4'-0" (depth), 3'-10" (width), 2'-4" (width), 2'-4" (width), 4'-0" (width)

Room 002 Dimensions:

- Overall width: 30'-3"
- Overall depth: 40'-4"
- Top wall: 1'-8" (left), 2'-7" (left), 2'-9" (left), 7'-4" (left), 1'-8" (left), 1'-4" (left), 2'-8" (left), 2'-0" (left), 11" (left), 4'-0" (left), 11'-9" (left), 1'-8" (left)
- Right wall: 3'-7" (top), 1'-8" (top), 3'-3" (top), 2'-9" (top), 3'-0" (middle), 40'-4" (bottom), 1'-8" (bottom)
- Bottom wall: 1'-8" (left), 7'-7" (left), 2'-9" (left), 1'-10" (left), 1'-11" (left), 7'-4" (left), 2'-11" (left), 2'-8" (left), 1'-8" (left)
- Internal dimensions: 13'-0" (width), 6'-0" (depth), 4'-0" (depth), 3'-10" (width), 2'-4" (width), 2'-4" (width), 4'-0" (width)

Staircase:

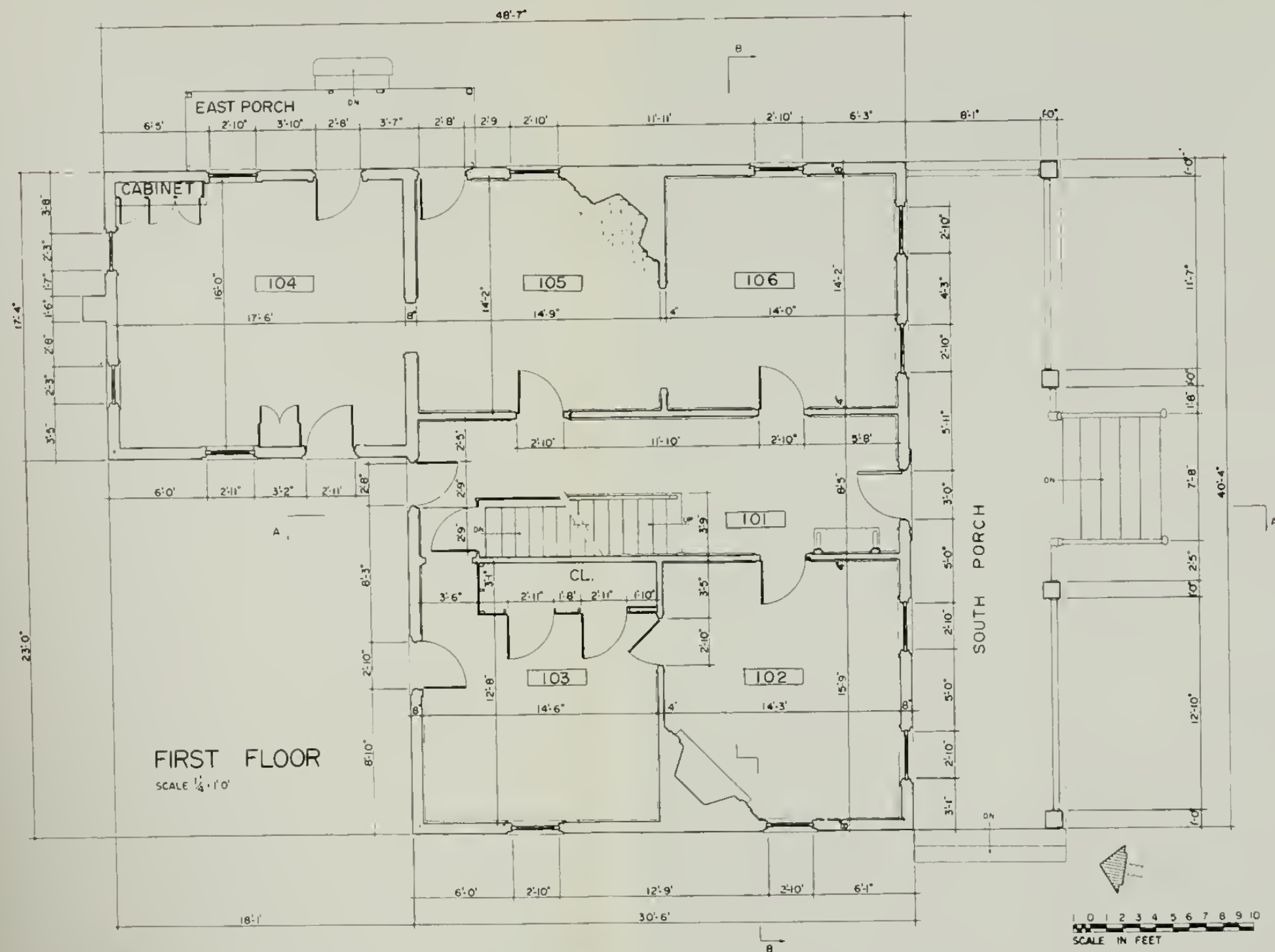
- Location: Between rooms 001 and 002, near the bottom left corner.
- Direction: Up (indicated by an arrow).
- Dimensions: 4'-0" (width), 2'-4" (width), 2'-4" (width), 3'-10" (width)

Other Features:

- Room 001: 13'-0" (width), 6'-0" (depth), 4'-0" (depth)
- Room 002: 13'-0" (width), 6'-0" (depth), 4'-0" (depth)
- Staircase: 4'-0" (width), 2'-4" (width), 2'-4" (width), 3'-10" (width)
- North Arrow: Located at the bottom right of the plan.
- Scale: 1" = 10' (indicated by a scale bar at the bottom right).

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 620
DRAWN VARIOUS		EXISTING CONDITION DRAWING	25,012
TECH. REVIEW BENNETT		FARMHOUSE-BASEMENT FLODR PLAN	PKG. NO 111
DATE DEC /85		SLATEFDRD FARM CDMPLEX	4
		DELAWARE WATER GAP N.R.A.	OF 29

D: TING DUS REVIEW: ETT /85	SUB SHEET NO. 	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - FIRST FLOOR PLAN SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012 PKG. NO. III SHEET 5 OF 29
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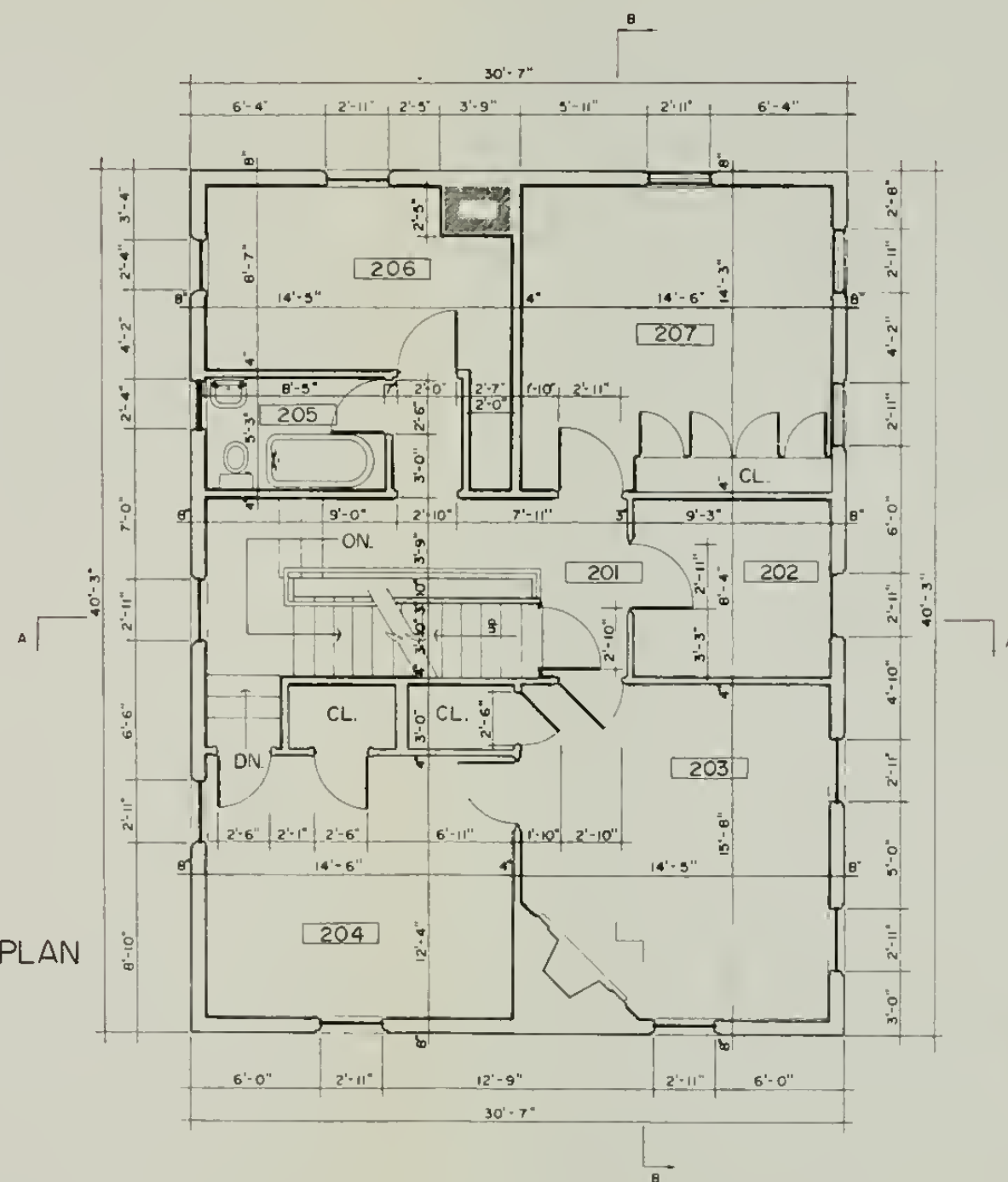


1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN: VARIOUS		EXISTING CONDITION DRAWING	620
TECH. REVIEW: BENNETT		FARMHOUSE - FIRST FLOOR PLAN	25.012
DATE DEC. /85		SLATEFORD FARM COMPLEX	PKG. NO. 111
		DELAWARE WATER GAP N.R.A.	SHEET 5
			OF 29

ED. TING	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.
OUS		EXISTING CONDITION DRAWING	620
REVIEW:		FARMHOUSE-SECOND FLOOR PLAN	25,012
NETT		SLATEFORD FARM COMPLEX	PKG. NO.
/85		DELAWARE WATER GAP N. R. A.	III
			SHEET
			6
			OF 29

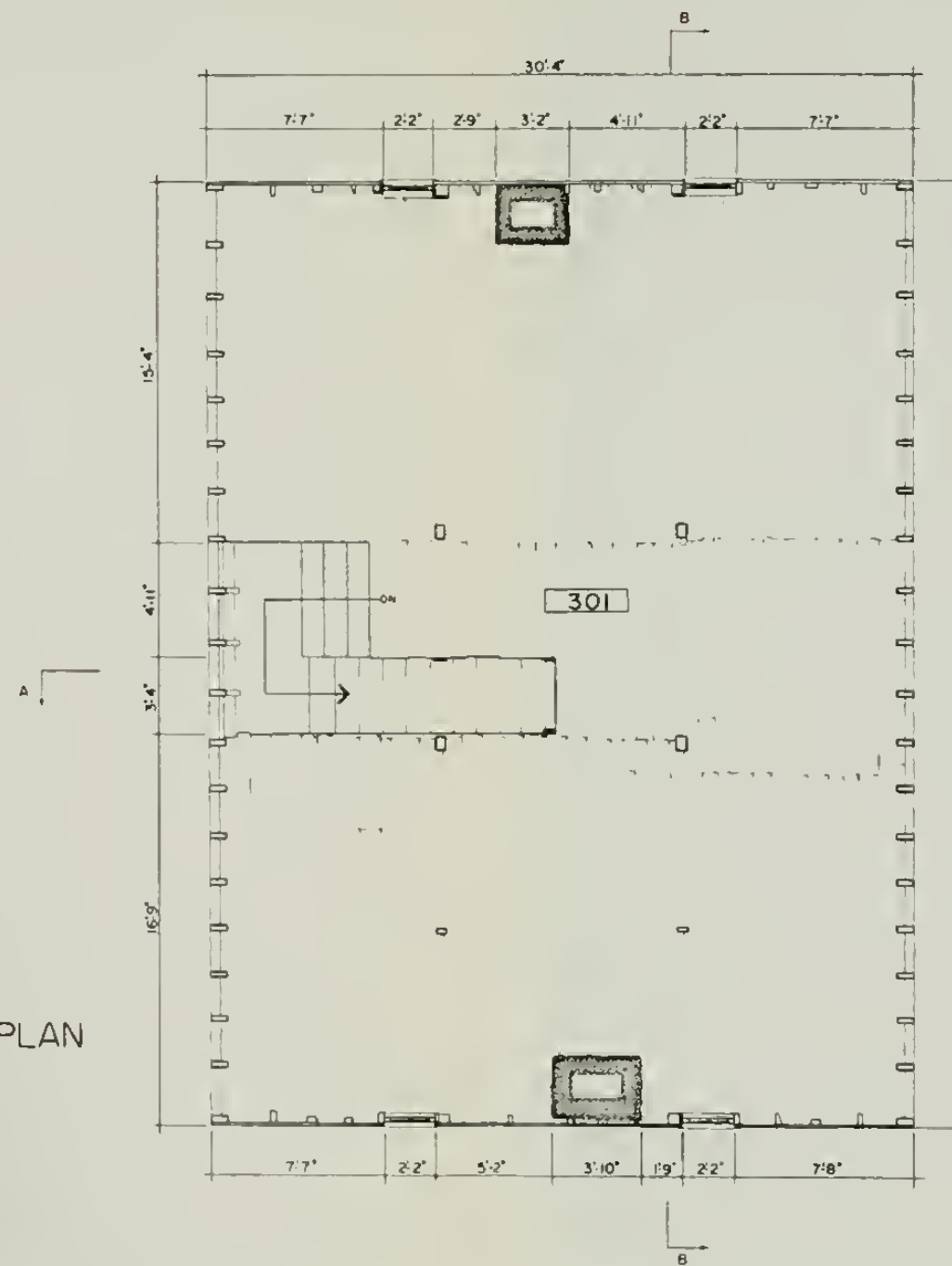
SECOND FLOOR PLAN SCALE 1/4" = 1'-0"



DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 620
DRAWN VARIOUS		EXISTING CONOITION DRAWING	25,012
TECH. REVIEW		FARMHOUSE-SECONO FLOOR PLAN	PKG. NO. III
BENNETT		SLATEFORO FARM COMPLEX	SHEET 6
DATE OEC /85		OELAWARE WATER GAP N.R. A.	OF 29

D. TING DUS REVIEW: ETT /85	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
		EXISTING CONDITION DRAWING FARMHOUSE-GARRET FLOOR PLAN SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	620
			25,012
			PKG. NO. III
			OF 29

GARRET FLOOR PLAN SCALE 1/4" = 1'-0"



DESIGNED: EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 620
DRAWN: VARIOUS		EXISTING CONDITION DRAWING	25,012
TECH. REVIEW: BENNETT		FARMHOUSE - GARRET FLOOR PLAN	PKG. NO. 111
DATE: DEC /85		SLATEFORD FARM COMPLEX	SHEET 7
		DELAWARE WATER GAP N R A	OF 29

D. TING OUS VIEW: NETT /85	SUB SHEET NO	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - SOUTH ELEVATION SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012	
			PKG. NO. III	SHEET 8
				OF 29

TOP RIDGE
EL. 30'-0"

ATTIC FLOOR
EL. 19'-2"

SECOND FLOOR
EL. 9'-9"

FIRST FLOOR
EL. 0

BASEMENT FLOOR
EL. -6'-10"



SOUTH ELEVATION

SCALE 1/4" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.	
DRAWN: VARIOUS		EXISTING CONDITION DRAWING		620	
TECH. REVIEW. BENNETT		FARMHOUSE - SOUTH ELEVATION		25,012	
DATE DEC /85		SLATEFORD FARM COMPLEX		PKG. NO. 111	SHEET 8
		DELAWARE WATER GAP N.R.A.			OF 29

ED:	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - EAST ELEVATION SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO.	
TING			620	
OUS			25,012	
REVIEW			PKG. NO.	SHEET
NETT			III	9
/85			OF	29

TOP RIDGE
EL 30'-0"

ATTIC FLOOR
EL 19'-2"

SECOND FLOOR
EL 9'-9"

FIRST FLOOR
EL 0

BASEMENT FLOOR
EL - 6'-10"



EAST ELEVATION
SCALE 1/4" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - EAST ELEVATION SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620	
DRAWN VARIOUS			25,012	
TECH. REVIEW BENNETT			PKG. NO. 111	SHEET 9
DATE DEC. /85			OF 29	

D ING OUS VIEW: ETT /85	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.
		EXISTING CONDITION DRAWING	620
		FARMHOUSE - NORTH ELEVATION	25,012
		SLATEFORD FARM COMPLEX	PKG. NO. 111 SHEET 10
		DELAWARE WATER GAP N. R. A.	OF 29

TOP RIDGE
EL 30'-0"

ATTIC FLOOR
EL 19'-2"

SECOND FLOOR
EL 9'-9"

FIRST FLOOR
EL 0

BASEMENT FLOOR
EL -6'-6"



NORTH ELEVATION

SCALE 1/4\" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - NORTH ELEVATION SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO 620	
DRAWN VARIOUS			25,012	
TECH. REVIEW BENNETT			PKG. NO. 111	SHEET 10
DATE DEC /85			OF 29	

D:	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.	
TING			620	
US			25,012	
VIEW:			PKG. NO.	SHEET
ETT			111	11
/85			OF 29	

EXISTING CONDITION DRAWING
FARMHOUSE - WEST ELEVATION
SLATEFORD FARM COMPLEX
DELAWARE WATER GAP N.R.A.

TOP RIDGE
EL 30'-0"

ATTIC FLOOR
EL 19'-2"

SECOND FLOOR
EL 9'-9"

FIRST FLOOR
EL 0

BASEMENT FLOOR
EL -6'-6"



WEST ELEVATION

SCALE - 1/4\" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONOITION DRAWING FARMHOUSE - WEST ELEVATION SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO 620	
DRAWN: VARIOUS			25,012	
TECH. REVIEW: BENNETT			PROG. NO. 111	SHEET 11
DATE DEC. /85			OF 29	

ED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.	
TING			620	
OUS			25,012	
REVIEW:			PKG. NO.	SHEET
NETT		EXISTING CONDITION DRAWING	11	12
/85		FARMHOUSE - SECTION A-A		OF 29
		SLATEFORD FARM COMPLEX		
		DELAWARE WATER GAP N.R.A.		

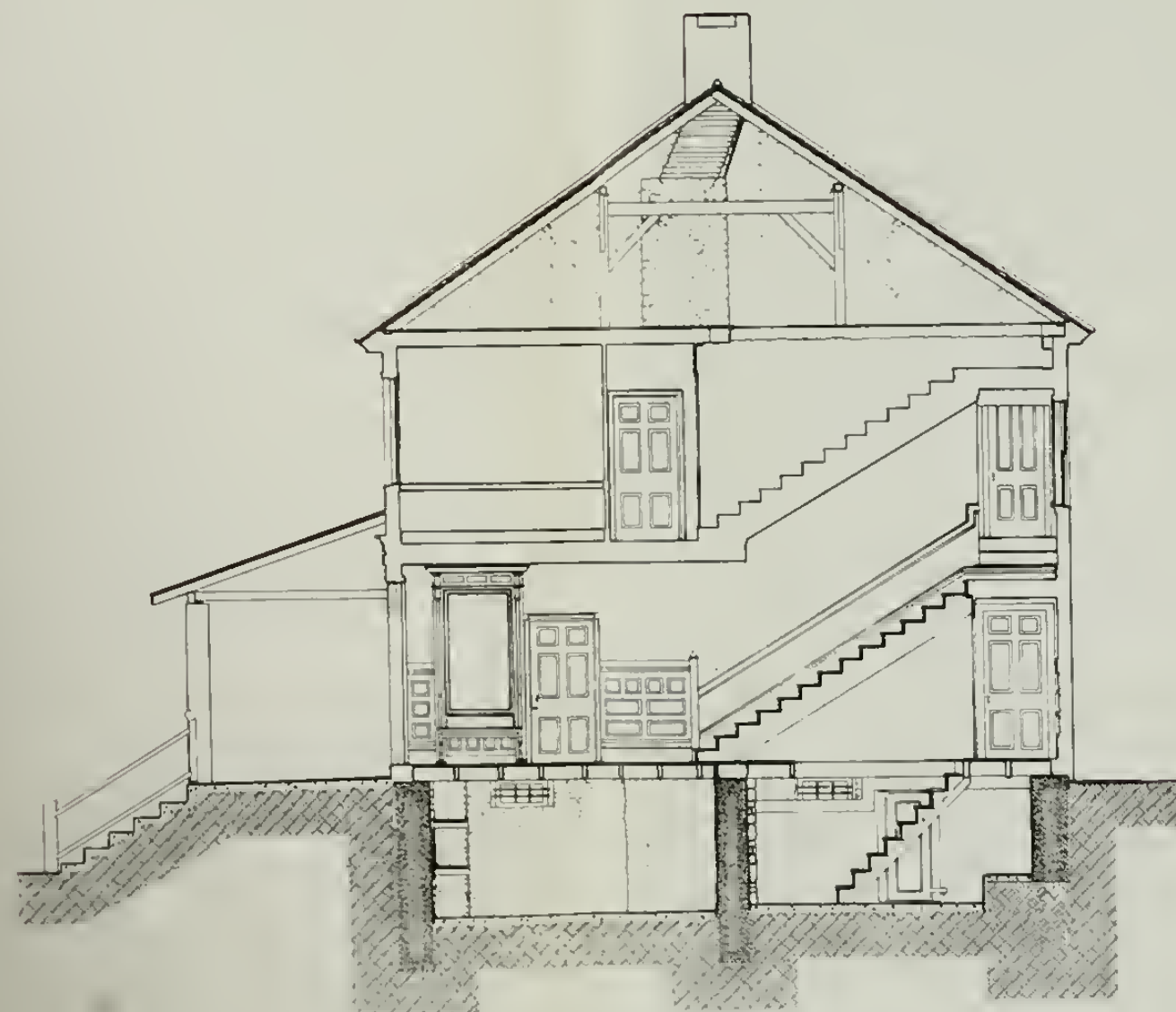
TOP RIDGE
EL 30'-0"

ATTIC FLOOR
EL 19'-2"

SECOND FLOOR
EL 9'-9"

FIRST FLOOR
EL 0

BASEMENT FLOOR
EL -6'-6"



SECTION A-A

SCALE: 1/4" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - SECTION A-A	DRAWING NO. 620 25,012
DRAWN: VARIOUS		SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	PKG. NO. 111
TECH. REVIEW: BENNETT			SHEET 12
DATE DEC. /85			OF 29

D ING OUS VIEW: JETT	SUB SHEET NO	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE - SECTION B-B SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO.	
			620	
			25,012	
			PKG. NO. 111	SHEET 13
/85			of 29	

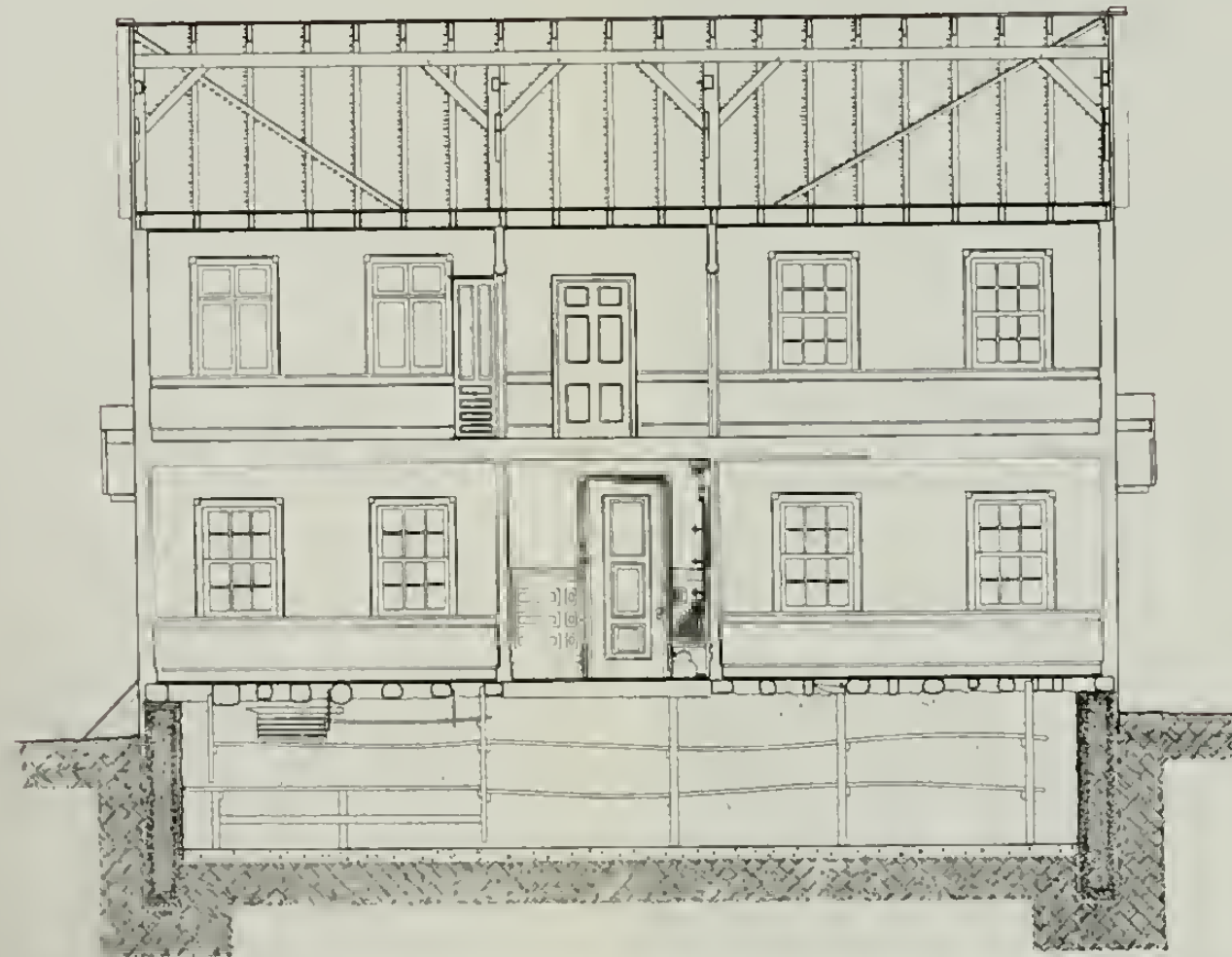
TOP RIDGE
EL 30'-0"

ATTIC FLOOR
EL 19'-2"

SECOND FLOOR
EL 9'-9"

FIRST FLOOR
EL 0

BASEMENT FLOOR
EL - 6'-10"



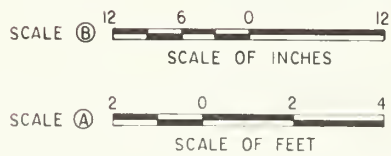
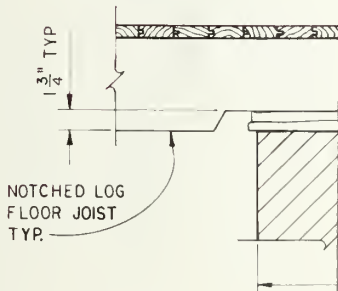
SECTION B-B
SCALE $\frac{1}{8}$ " = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONOITION DRAWING FARMHOUSE - SECTION B-B SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO 620	
DRAWN: VARIOUS			25,012	
TECH. REVIEW BENNETT			PKG. NO. 111	SHEET 13
DATE DEC. /85			of 29	

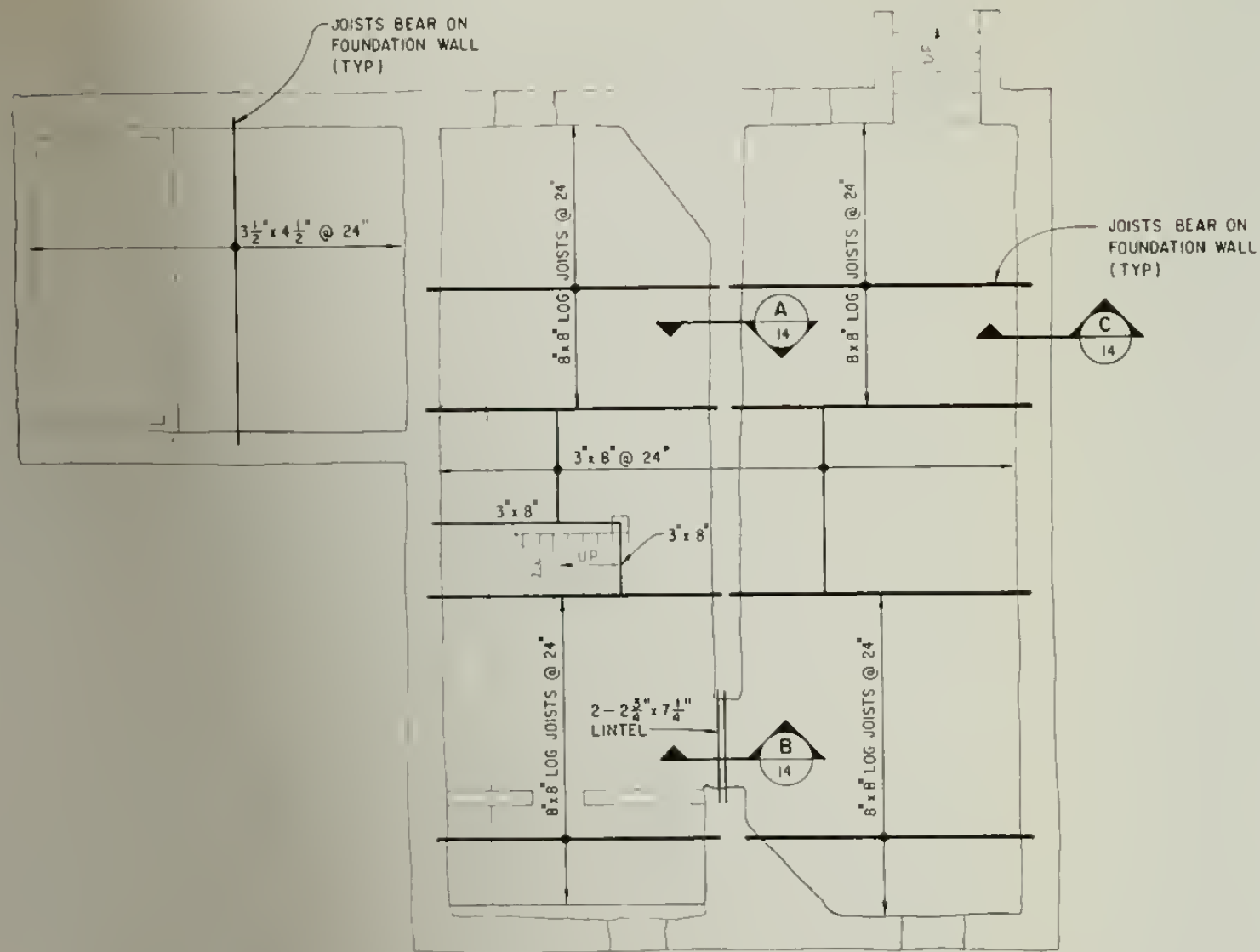


N WALL

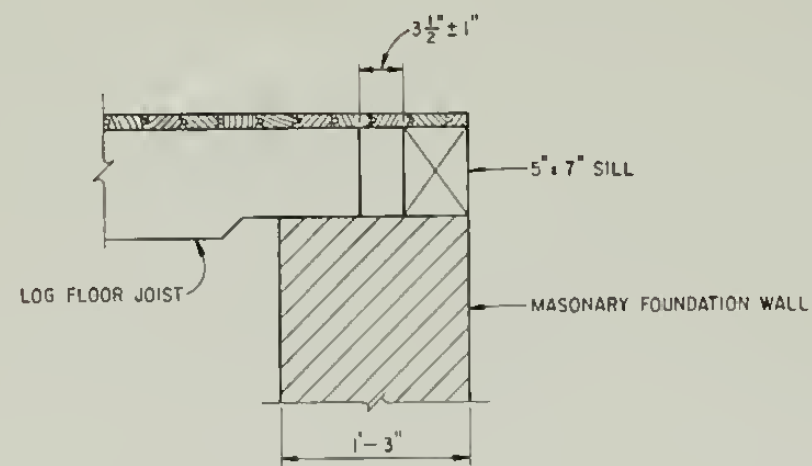


INTERIOR FOUNDATION
SCALE (B)

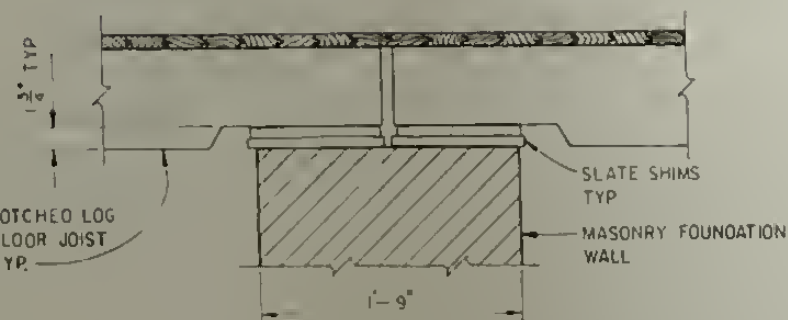
DATE 12/85	SUB SHEET NO. 1	TITLE OF SHEET EXISTING CONDITION DWGS. FARMHOUSE-MISC. FRAMING DETAILS SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012
DESIGNED BY REVIEWED BY CHECKED BY	DATE 12/85	PKG. NO. III	SHEET 14 of 29



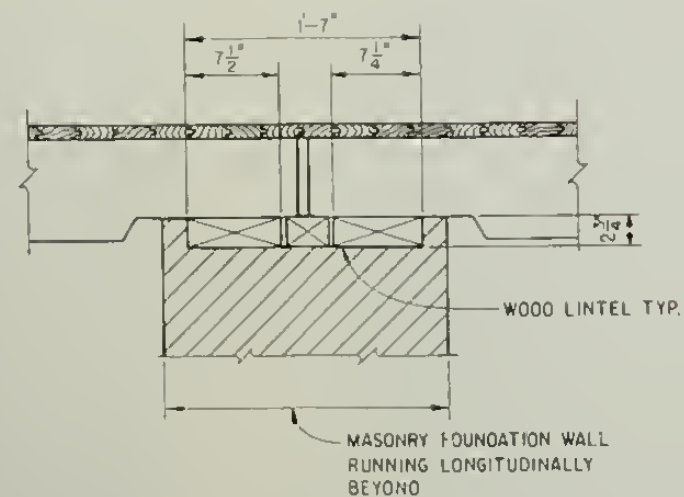
FIRST FLOOR FRAMING PLAN
SCALE (A)



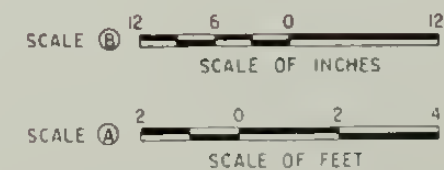
PERIMETER FOUNDATION WALL SECTION
SCALE (B)



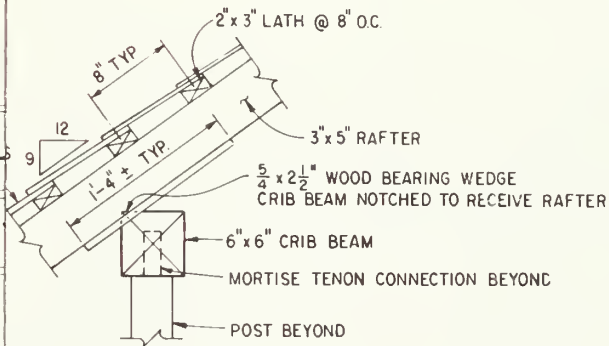
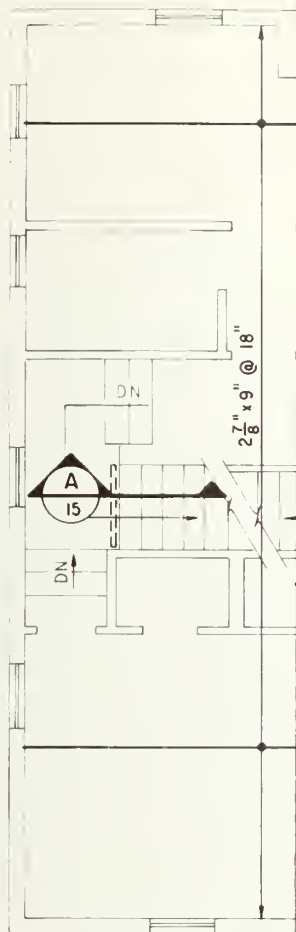
INTERIOR FOUNDATION WALL SECTION
SCALE (B)



BASEMENT LINTEL SECTION
SCALE (B)

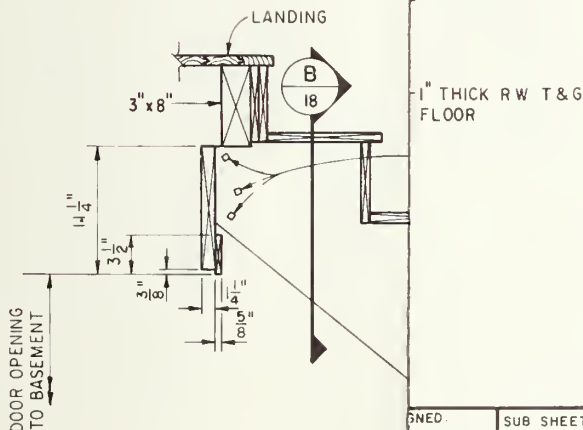


DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DWGS. FARMHOUSE-MISC. FRAMING DETAILS	DRAWING NO. 620 25,012
DRAWN. VARIOUS		SLATEFORD FARM COMPLEX	PKG NO III
TECH. REVIEW BENNETT		DELAWARE WATER GAP N.R.A.	SHEET 14
DATE 12/85			OF 29

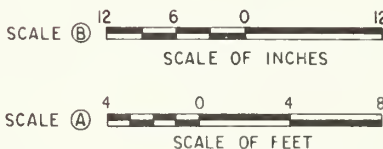


RAFTER AND CRIB FRAMING DETAIL (D) 15
SCALE (B)

SECOND FLOOR
SCALE (A)



SECTION
SCALE (B)

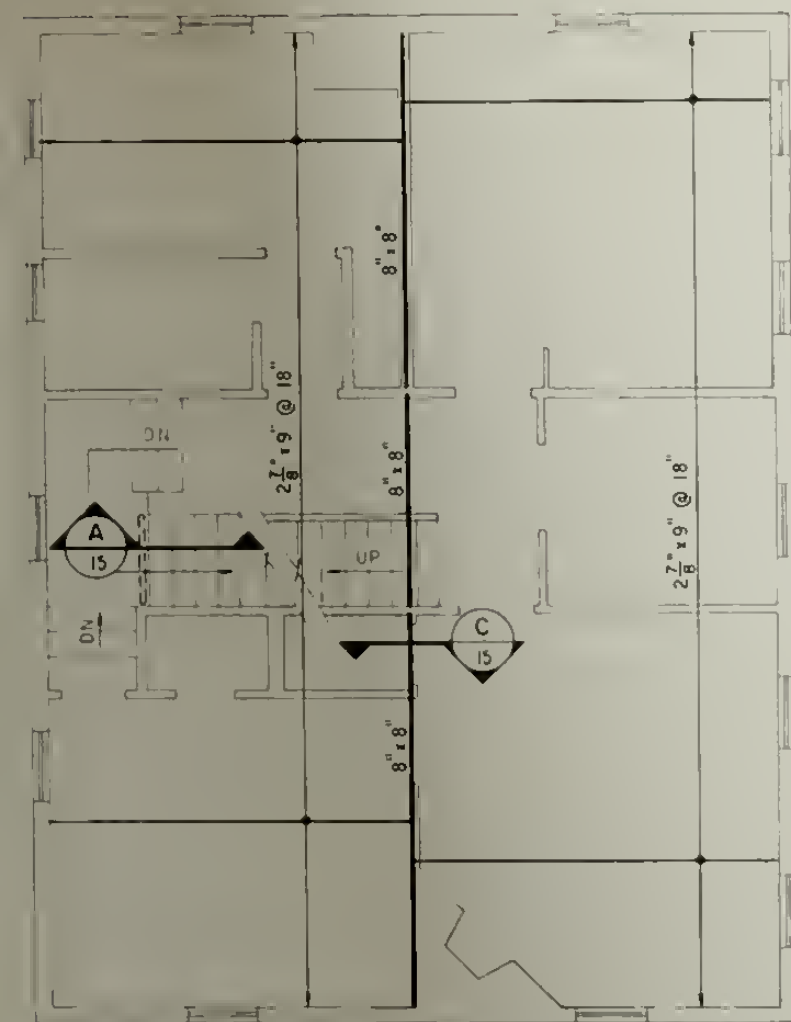


DESIGNED BY:
REYNOLDS
CHECKED BY:
REVIEW:
NETT
DATE: 12/85

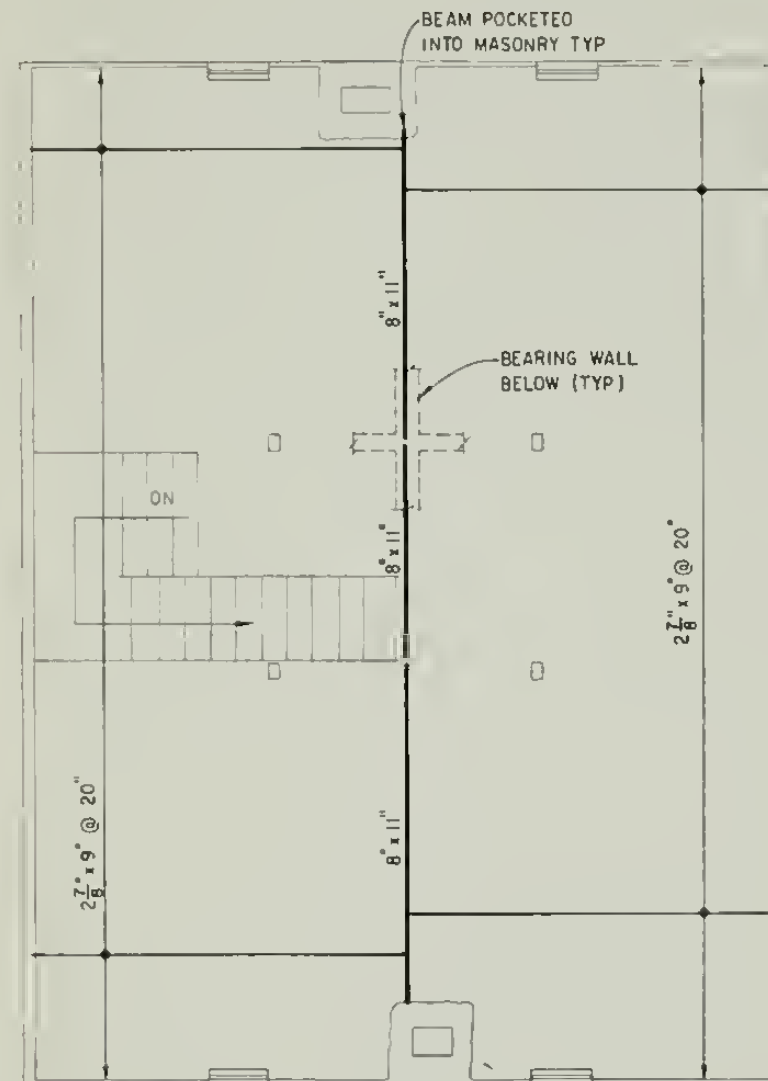
SUB SHEET NO.
1

TITLE OF SHEET
**EXISTING CONDITION DWGS.
FARMHOUSE-MISC. FRAMING
DETAILS**
SLATEFORD FARM COMPLEX
DELAWARE WATER GAP N.R.A.

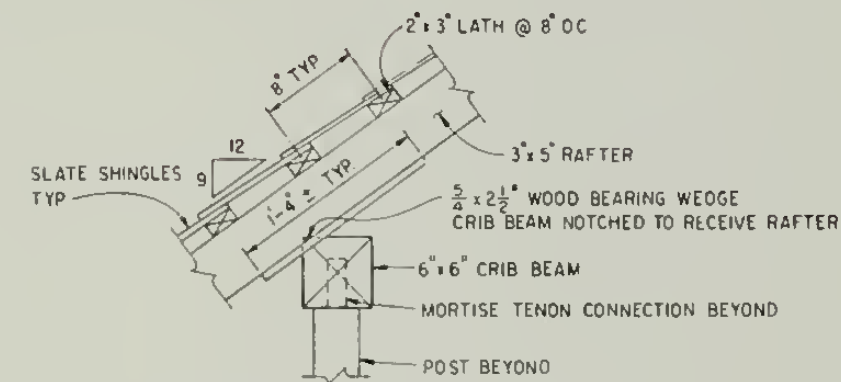
DRAWING NO.
620
25,012
PKG. NO.
III
SHEET
15
OF 29



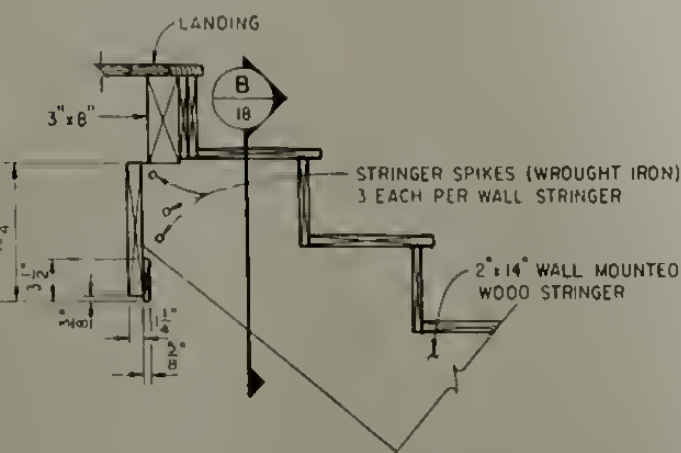
SECOND FLOOR FRAMING PLAN
SCALE (A) PLAN NORTH



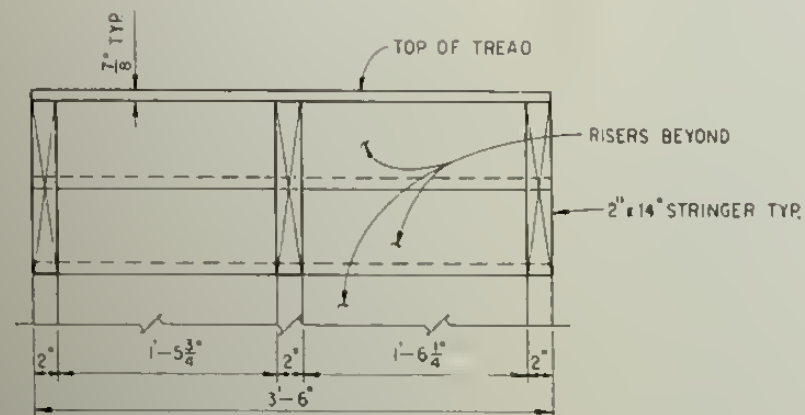
GARRET FLOOR FRAMING PLAN
SCALE (A) PLAN NORTH



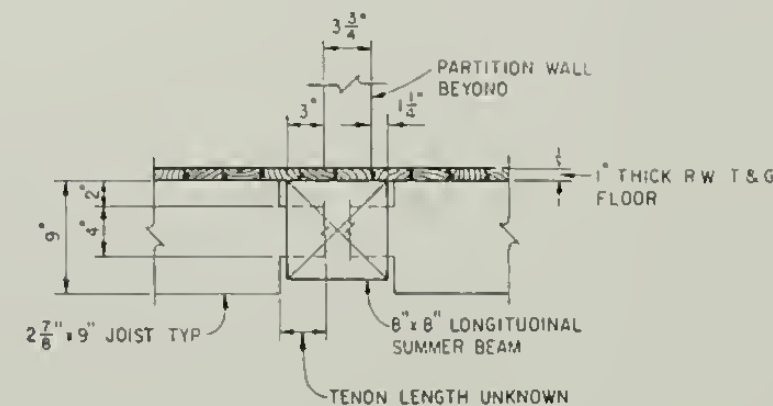
RAFTER AND CRIB FRAMING DETAIL (D-15)
SCALE (B)



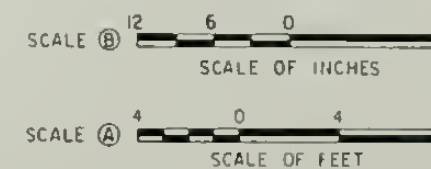
SECTION (A-15)
SCALE (B)



SECTION (B-15)
SCALE (B)



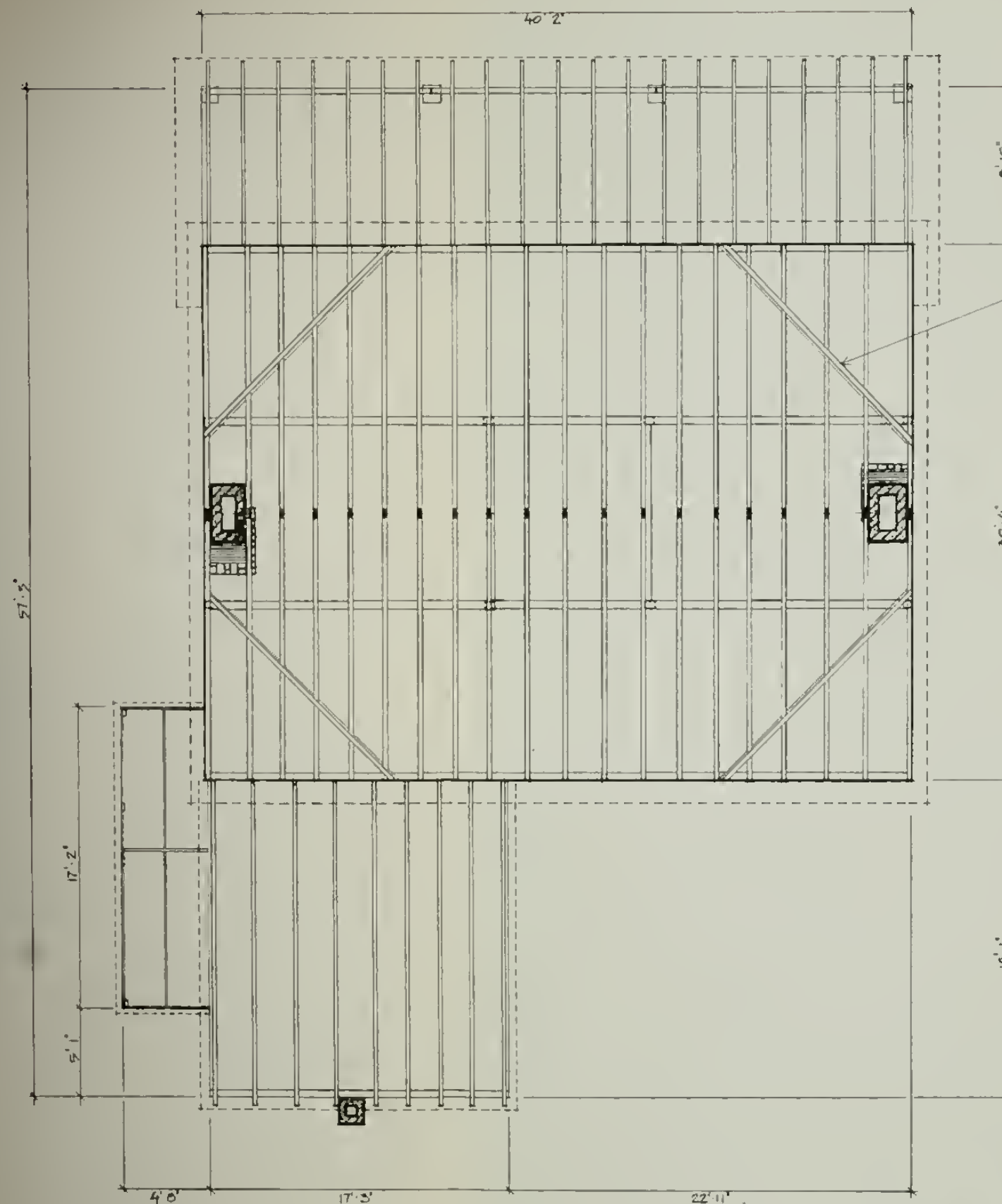
SECTION (C-15)
SCALE (B)



DESIGNED L. REYNOLDS	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DWGS. FARMHOUSE - MISC. FRAMING DETAILS	DRAWING NO. 620 25,012
DRAWN: Soderberg		SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	PKG NO. III
TECH. REVIEW. BEHNETT			SHEET 15
DATE: 12/85			OF 29

AGONAL BRACING
ADJOINING RAFTERS -
ALL 4 CORNERS

D: TING OUS VIEW: ETT /85	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING FARMHOUSE-ROOF FRAMING PLAN SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012	
			PKG. NO. III	SHEET 16
				OF 29

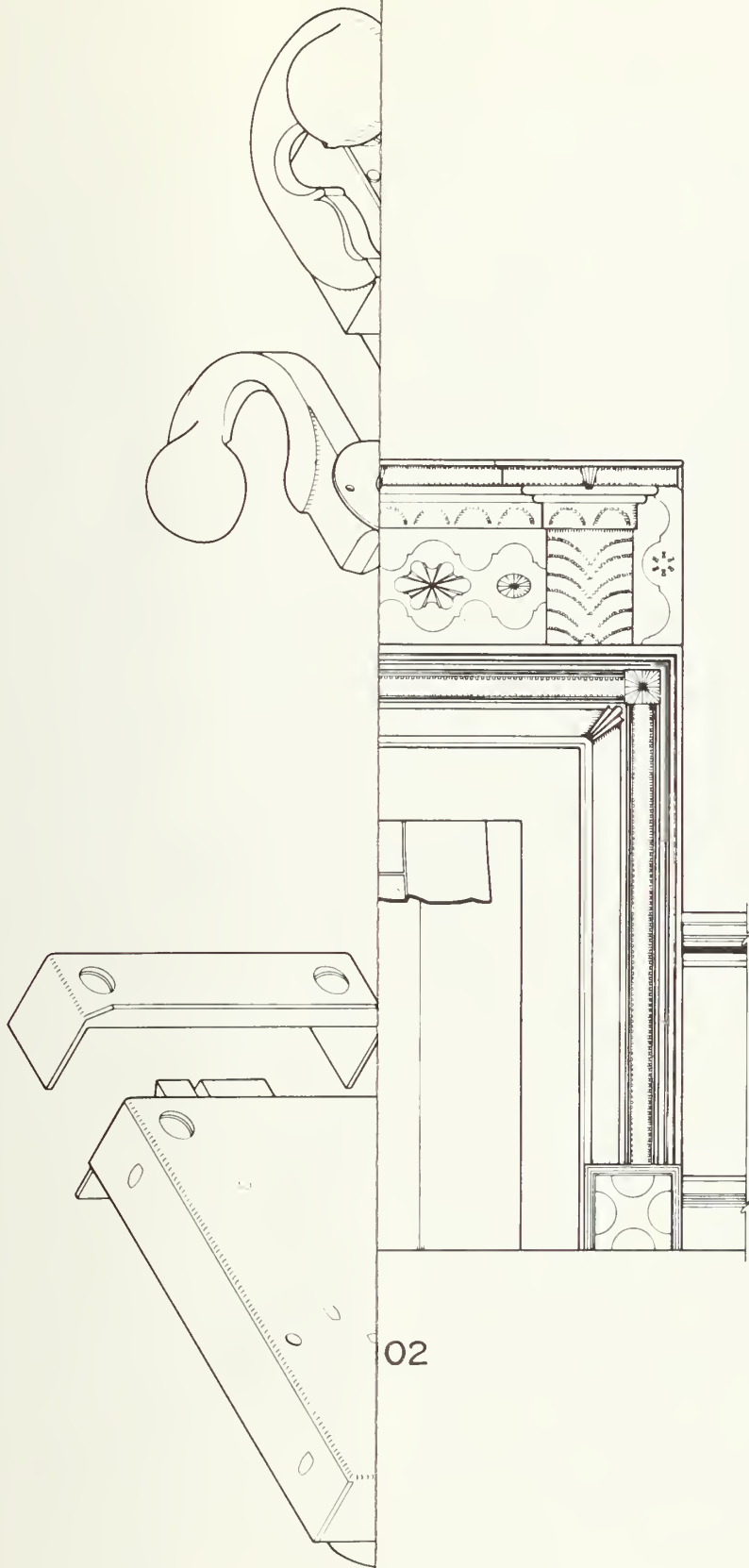


1" X 2 1/2" DIAGONAL BRACING
LET INTO ADJOINING RAFTERS -
TYPICAL AT ALL 4 CORNERS

ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"
DATE 11/14/85



DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING	DRAWING NO. 620
DRAWN: VARIOUS		FARMHOUSE-ROOF FRAMING PLAN	25,012
TECH. REVIEW BENNETT		SLATEFORD FARM COMPLEX	PKG. NO. 111
DATE DEC /85		OELAWARE WATER GAP N.R.A.	SHEET 16
			OF 29



02

D:
TING

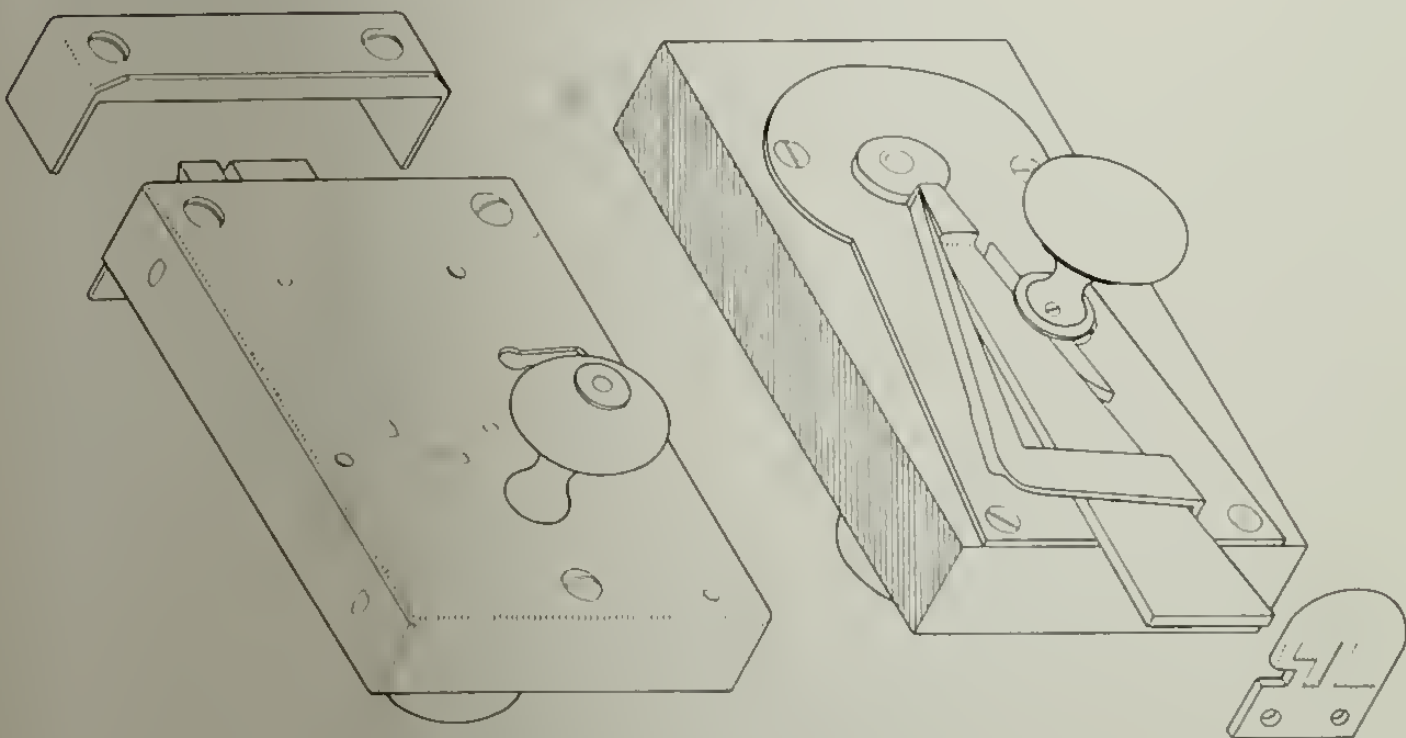
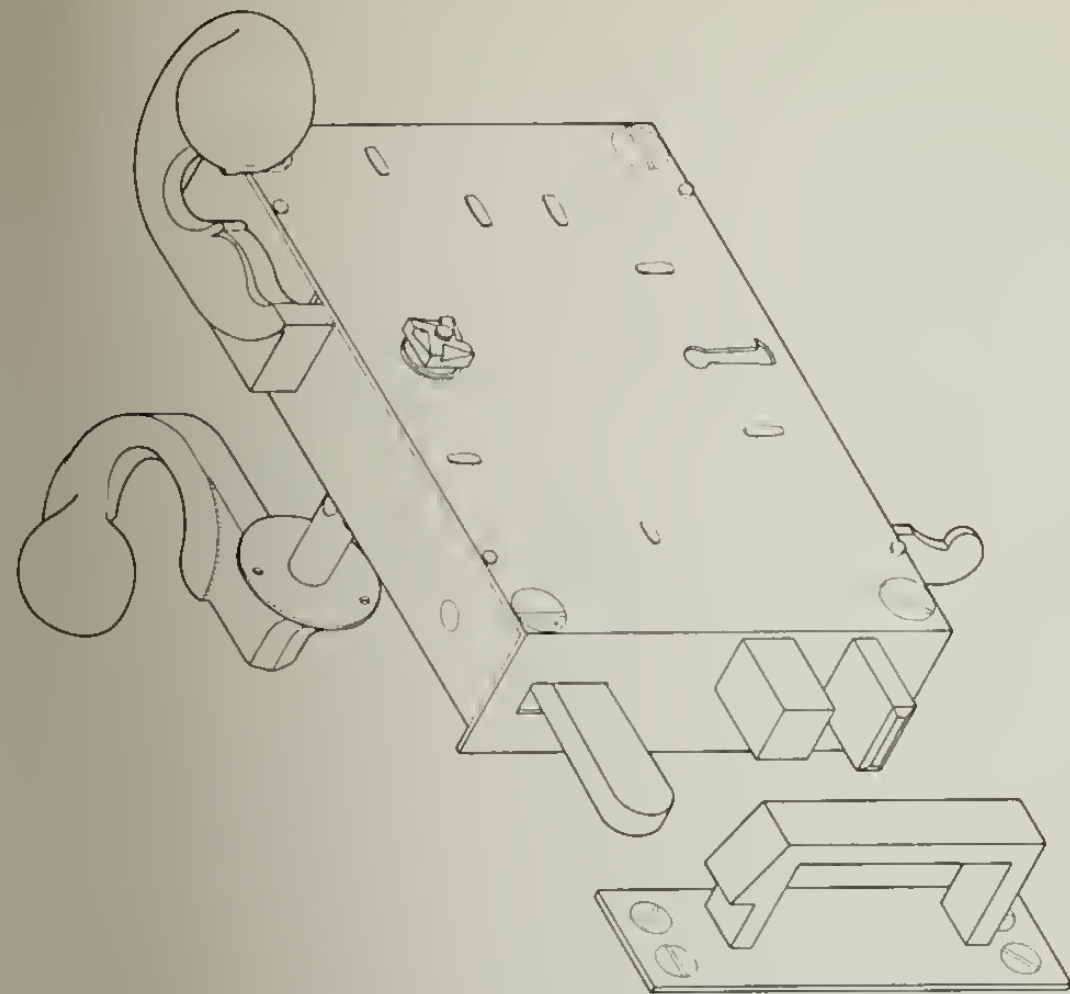
DUS
VIEW
ETT

/85

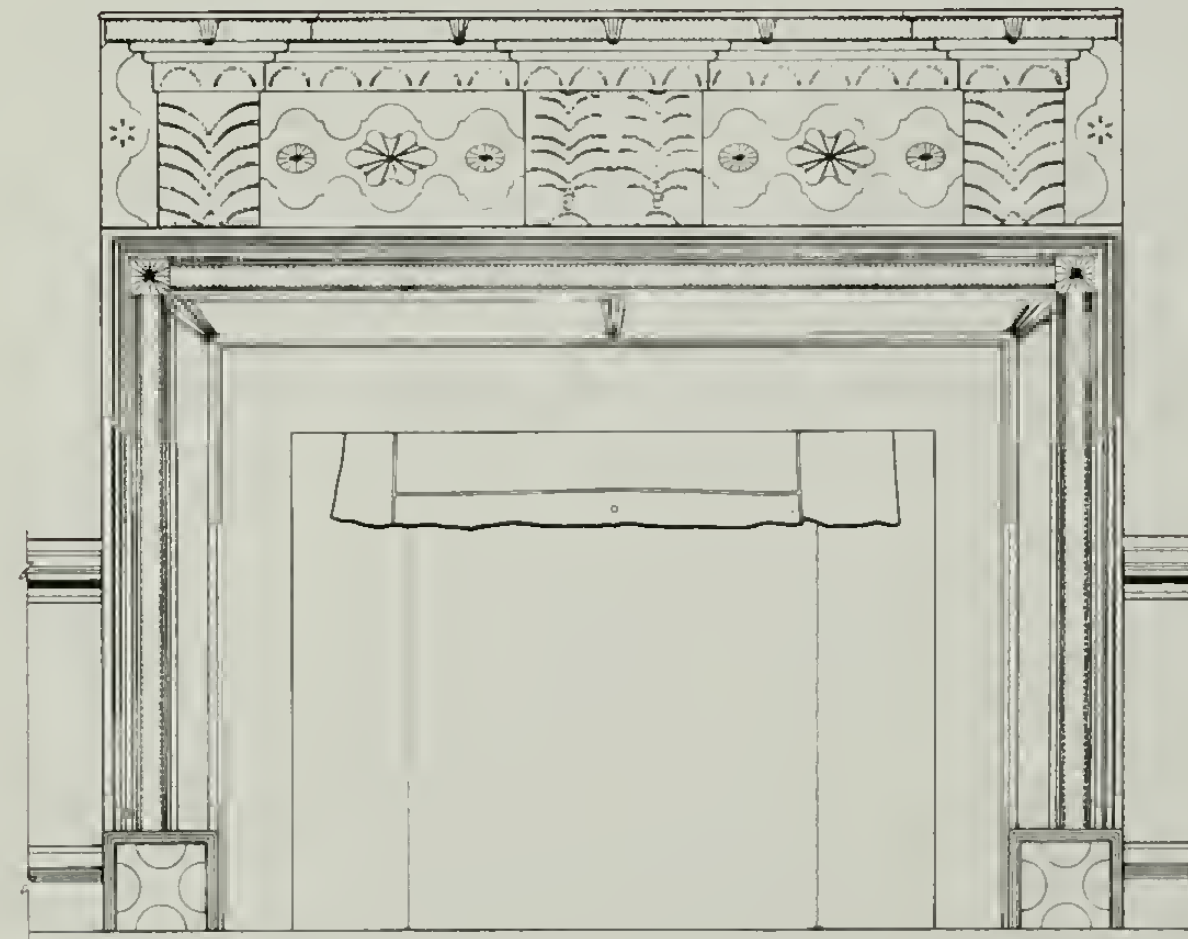
SUB SHEET NO

TITLE OF SHEET
EXISTING CONDITION DRAWING
FARMHOUSE-MISCELLANEOUS DETAILS
SLATEFORD FARM COMPLEX
DELAWARE WATER GAP N.R.A.

DRAWING NO.
620
25,012
PKG.
NO.
III
SHEET
17
OF 29



TYPICAL LATCHES - ISOMETRIC
FULL SCALE

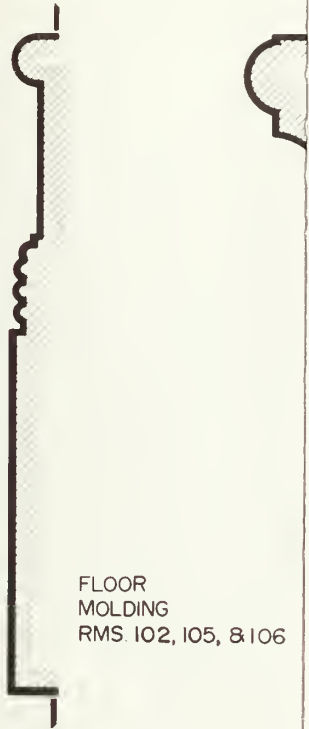


FIREPLACE, RM-102

SCALE - 1 1/2" = 1'-0"



DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN: VARIOUS		EXISTING CONOITION ORAWING	620
TECH. REVIEW		FARMHOUSE-MISCELLANEOUS OETAILS	25,012
BENNETT		SLATEFORO FARM COMPLEX	PKG NO. 17
DATE DEC /85		DELAWARE WATER GAP N.R.A.	SHEET 17
			OF 29



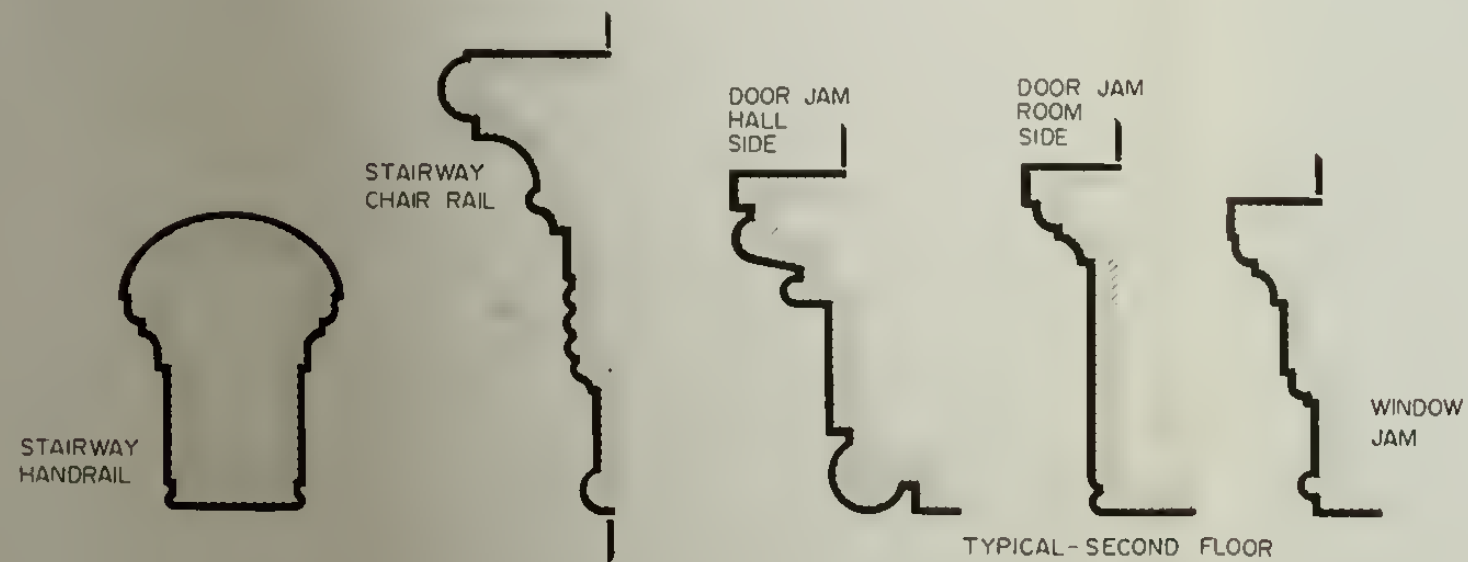
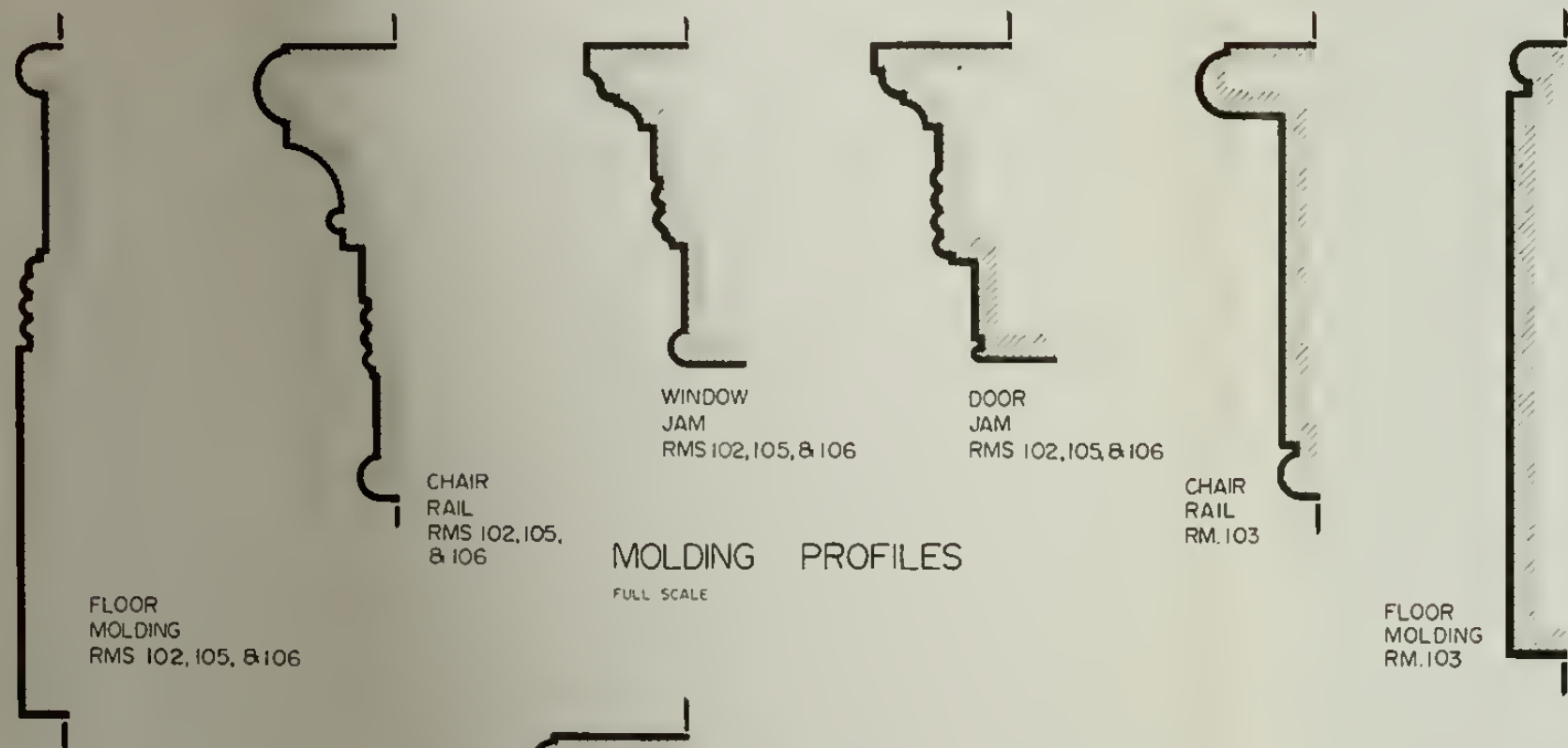
FLOOR
MOLDING
RMS. 102, 105, & 106



STAIRWAY
HANDRAIL



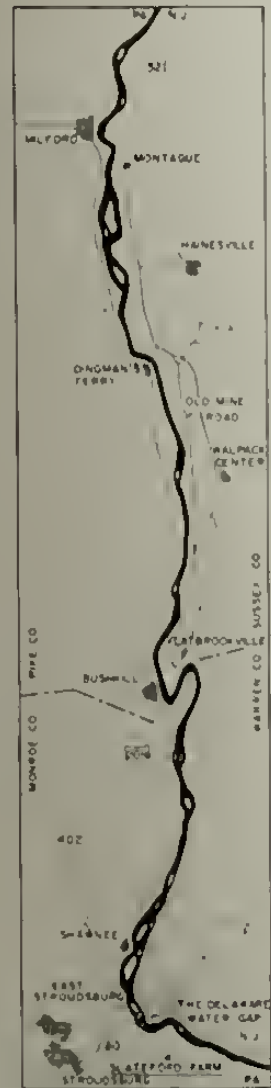
ED TING	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.
IOUS		EXISTING CONDITION DRAWING	620
REVIEW		FARMHOUSE COMPLEX-MOLDING PROFILE	25,012
NETT		SLATEFORD FARM COMPLEX	PKG. NO. 18
/85		DELAWARE WATER GAP N R A	SHEET OF 29



DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.	
DRAWN VARIOUS		EXISTING CONDITION DRAWING		620	
TECH. REVIEW BENNETT		FARMHOUSE COMPLEX-MOLDING PROFILE		25,012	
DATE DEC /85		SLATEFORD FARM COMPLEX		PKG. NO.	SHEET
		DELAWARE WATER GAP N R A		111	18
					OF 29

D T I N G OUS REVIEW NETT / 85	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
		EXISTING CONDITION DRAWING	620
		INFORMATIONAL DIVIDER	25,012
		SLATEFORD FARM COMPLEX	PKG. NO. 111 SHEET 19 OF 29
		DELAWARE WATER GAP N.R.A.	

SLATEFORD FARM — WOODSHED

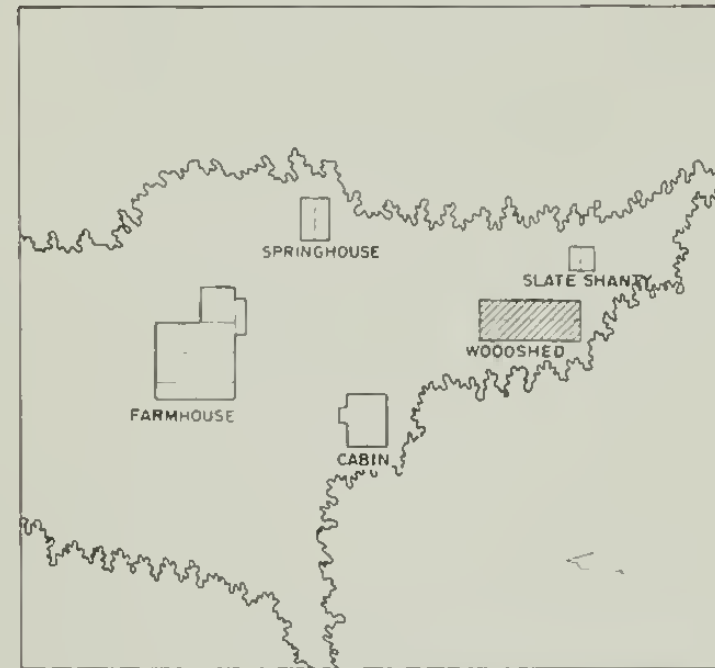


DELAWARE RIVER VALLEY

0 1 2 3 4 5 SCALE IN MILES

WOODSHED

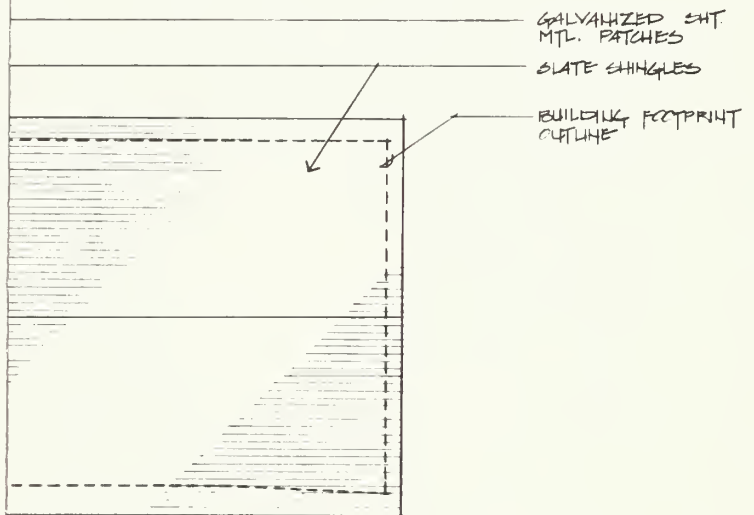
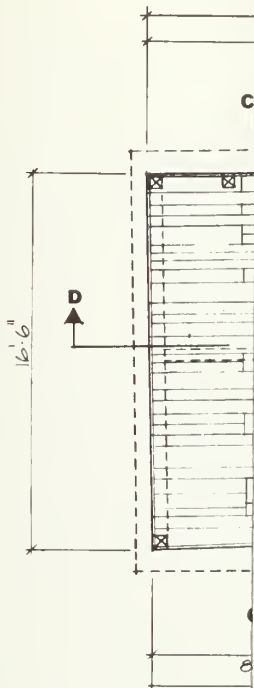
THE WOODSHED IS A COMPOSITE OF TWO WOOD-FRAMED BUILDINGS THAT WERE PLACED END TO END. THE ROOF LAP-OVER AND THE OUTSIDE WALL ALIGNMENT SHOW THAT THE WESTERN COMPONENT WAS SUPERIMPOSED ON THE OLDER EASTERN SIDE. EACH INDIVIDUAL CONFIGURATION CAN STILL BE SEEN.



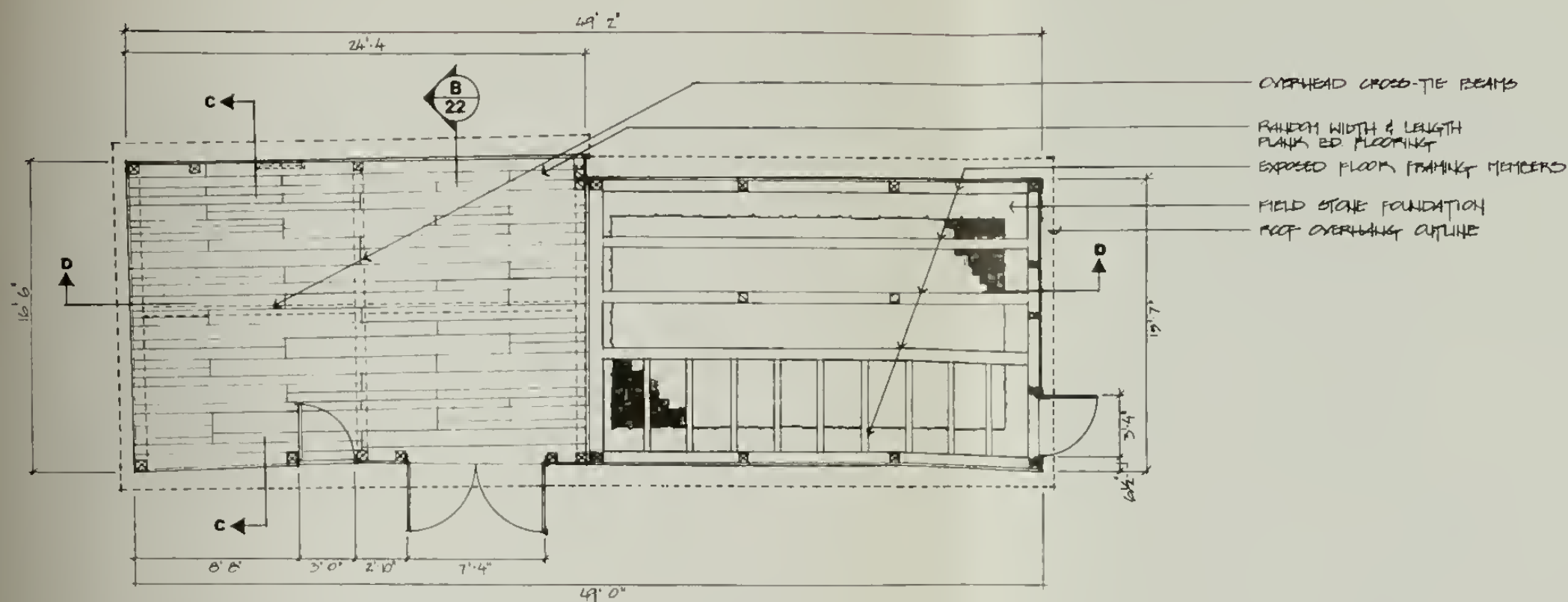
BUILDING KEY MAP

0 50 100 150
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER	DRAWING NO. 620
DRAWN VARIDUS			25,012
TECH. REVIEW BENNETT		SLATEFORD FARM COMPLEX DELAWARE WATER GAP N R A	PKG. NO. 111
DATE DEC / 85			SHEET 19
			OF 29

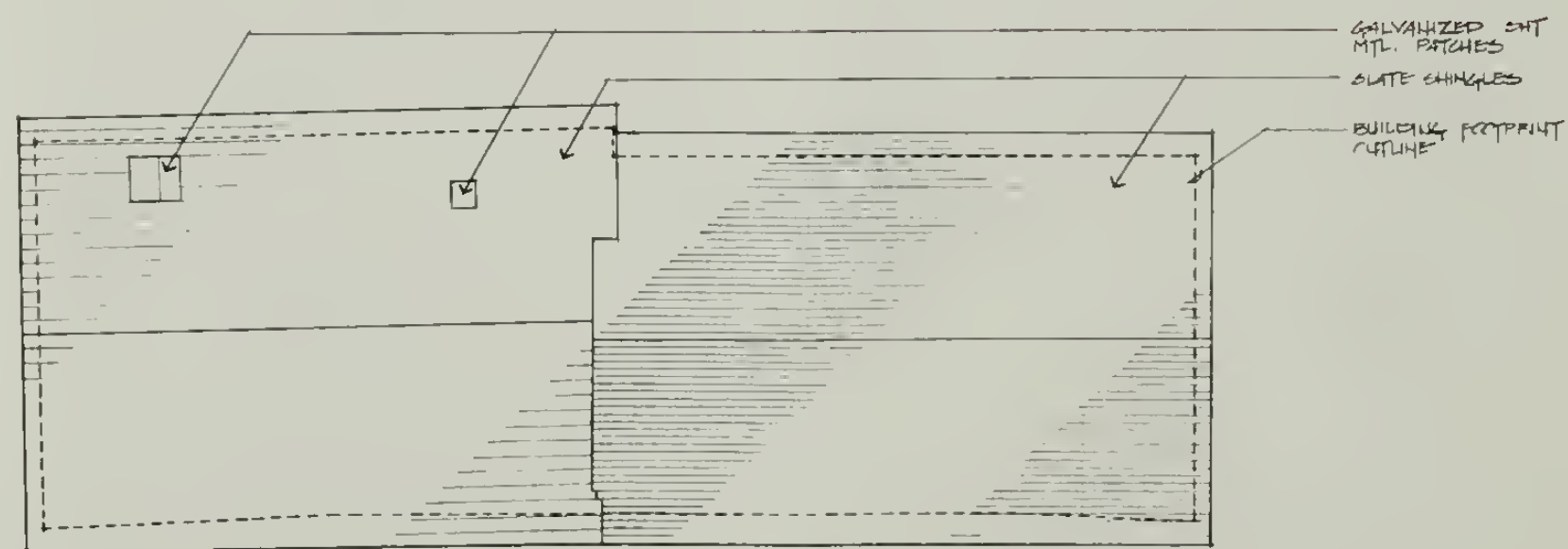


ED TING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
NETT REVIEW:		EXISTING CONDITION DRAWING	620
NETT		WOODSHED - PLANS	25, 012
1/25		SLATEFORD FARM COMPLEX	PKG. NO. 111
		DELAWARE WATER GAP N.R.A.	SHEET 20
			OF 29

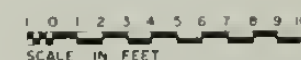


FLOOR PLAN
SCALE: 1/4" = 1' 0"

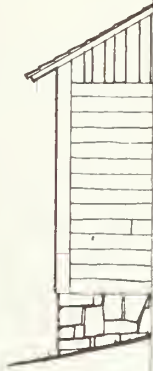
- OVERHEAD CROSS-TIE BEAMS
- RANDOM WIDTH & LENGTH PLANK ED FLOORING
- EXPOSED FLOOR FRAMING MEMBERS
- FIELD STONE FOUNDATION
- ROOF OVERHANG OUTLINE



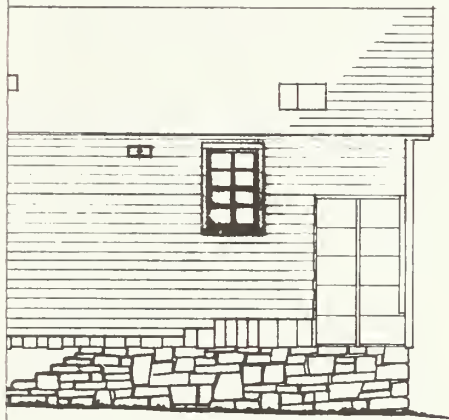
ROOF PLAN
SCALE: 1/4" = 1' 0"



DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING WOODSHED - PLANS SLATEFORD FARM COMPLEX DELAWARE WATER GAP L.R.A.	DRAWING NO. 620 25, 012
DRAWN BELNETT			PRG. NO. 111
TECH. REVIEW BELNETT			SHEET 20
DATE DEC / 05			OF 29



E4
SCALE

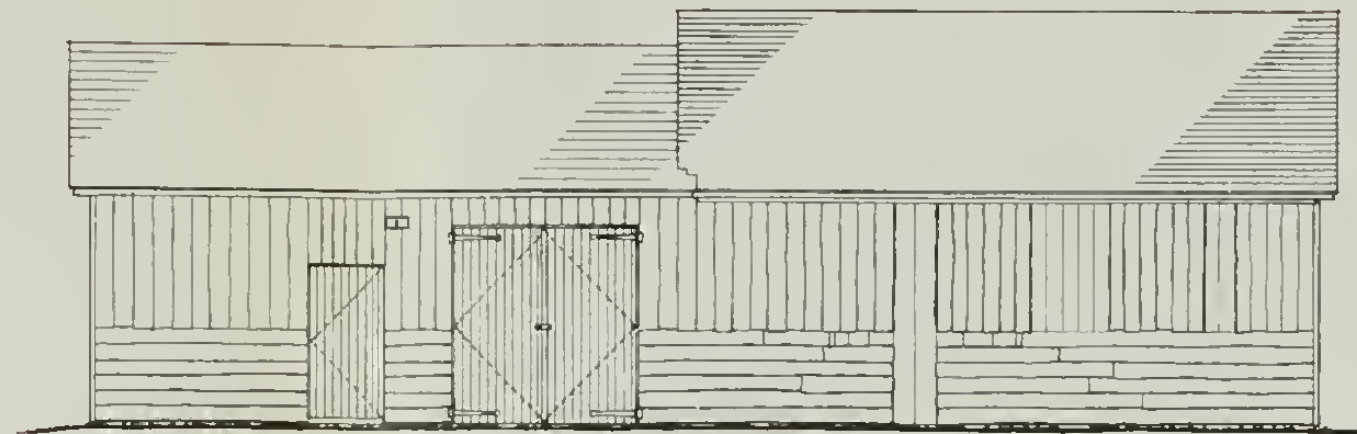


0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

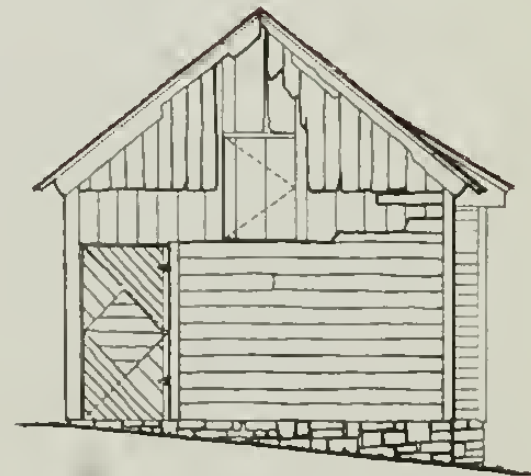
DESIGNED BY: NETT	SUB SHEET NO. 	TITLE OF SHEET EXISTING CONDITION DRAWING WOODSHED ELEVATIONS SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 27,012
REVIEWED BY: NETT			PKG. NO. 111
DATE 1/05			SHEET 21 OF 29



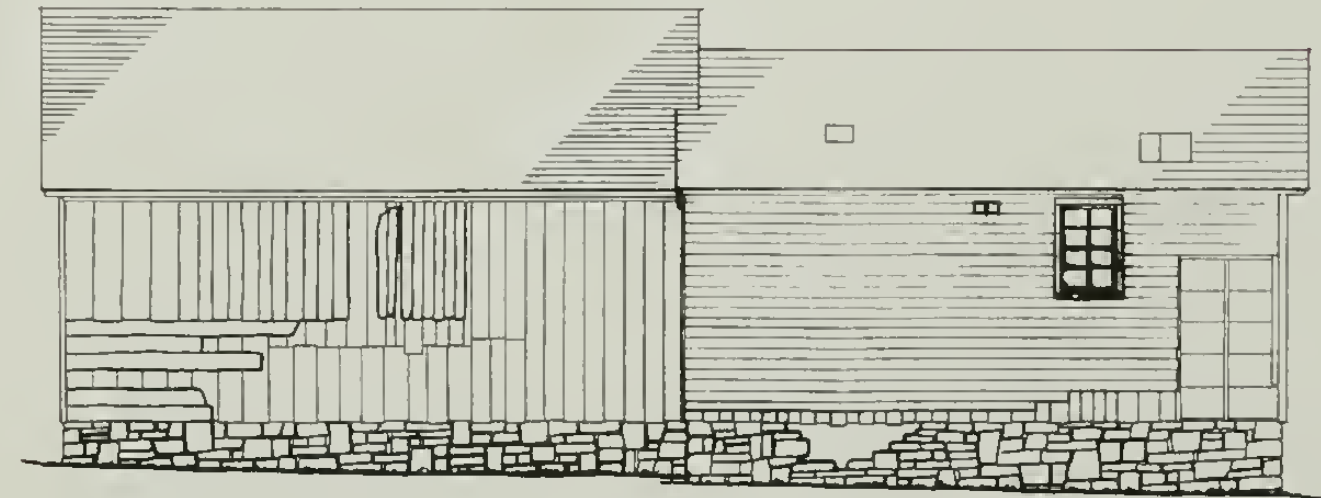
EAST ELEVATION
SCALE: 1/4" = 1' 0"



NORTH ELEVATION
SCALE: 1/4" = 1' 0"



WEST ELEVATION
SCALE: 1/4" = 1' 0"



SOUTH ELEVATION
SCALE: 1/4" = 1' 0"

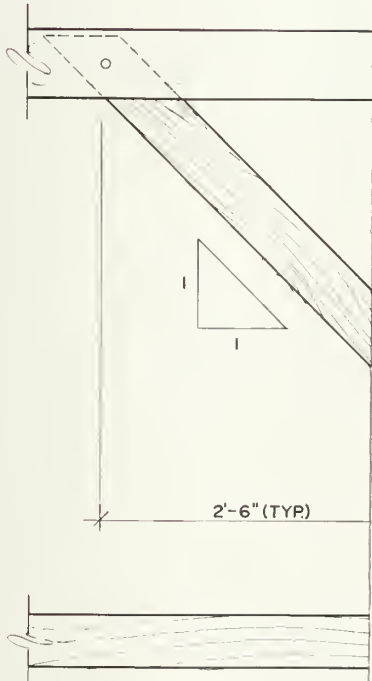
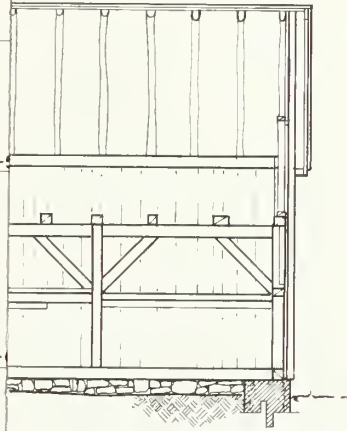
1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING	DRAWING NO. 620
DRAWN BENNETT		WOODSHED ELEVATIONS	27,012
TECH. REVIEW: BENNETT		SLATEFORD FARM COMPLEX	PKG. NO. 111
DATE DEC /05		DELAWARE WATER GAP N.R.A.	SHEET 21
			OF 29

RIDGE EL. 14'-3"

TOP OF CROSS TIE EL. 8'-0"

TOP OF FIN. FLOOR EL. 0'-0"



KNEE BRACE
SCALE: 1 1/2" = 1'-0"
SCALE IN FEET

DESIGNED BY: JETT
CHECKED BY: JETT
DATE: 1/85

SUB SHEET NO. _____

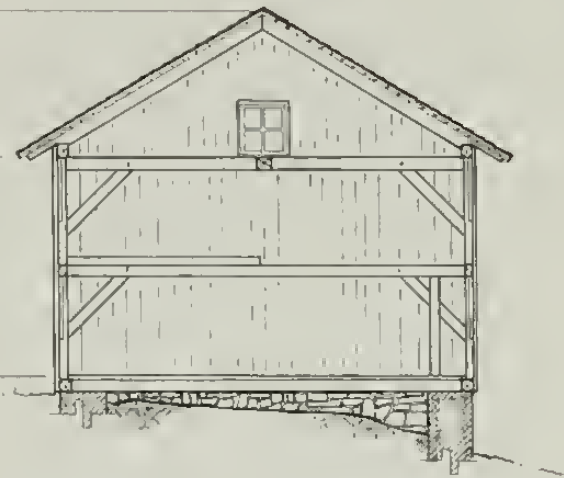
TITLE OF SHEET
EXISTING CONDITION DRAWING
WOODSHED- SECTIONS
SLATEFORD FARM COMPLEX
DELAWARE WATER GAP N.R.A.

DRAWING NO. 620
25,012
PKG. NO. 111
SHEET 22
OF 29

RIDGE EL. 14'-3"

TOP OF CROSS TIE EL. 8'-5"

TOP OF FIN FLOOR EL. 0'-0"



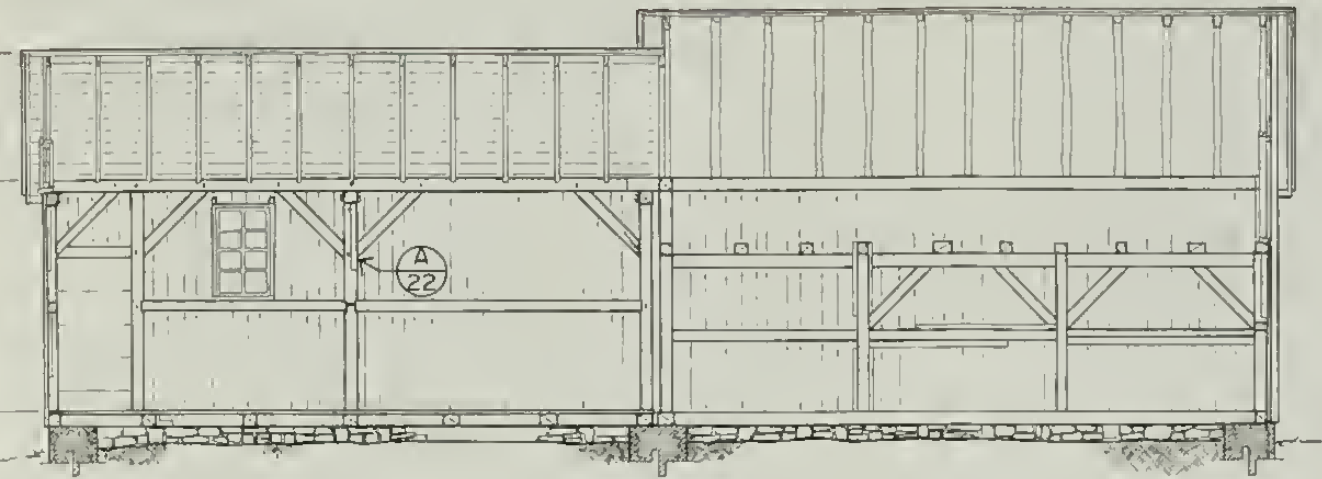
TRANSVERSE SECTION C-C

SCALE: 1/4" = 1'-0"
1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

RIDGE EL. 14'-3"

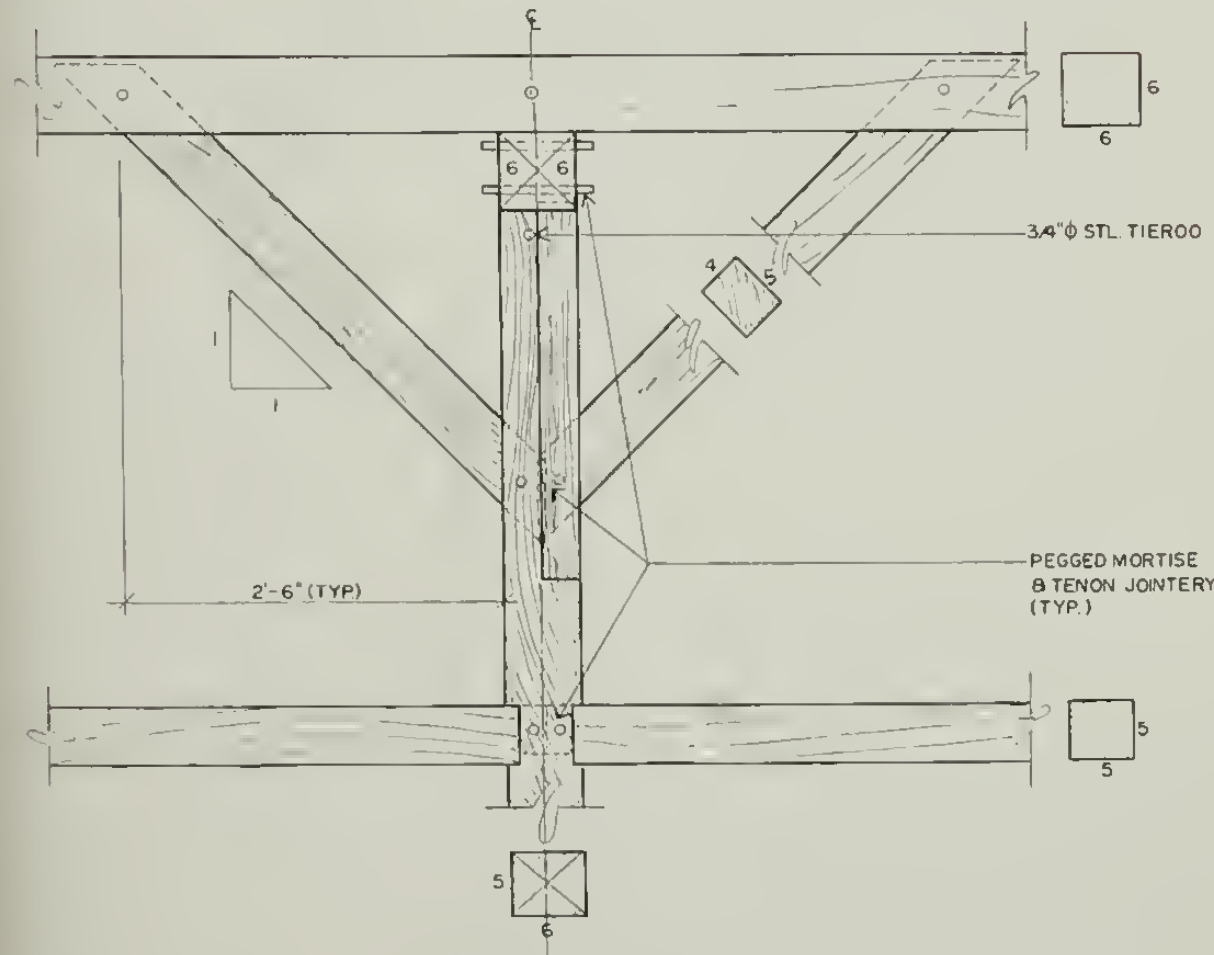
TOP OF LONG L. BEAM EL. 9'-1"

TOP OF FIN FLOOR EL. 0'-0"



LONGITUDINAL SECTION D-D

SCALE: 1/4" = 1'-0"
1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET



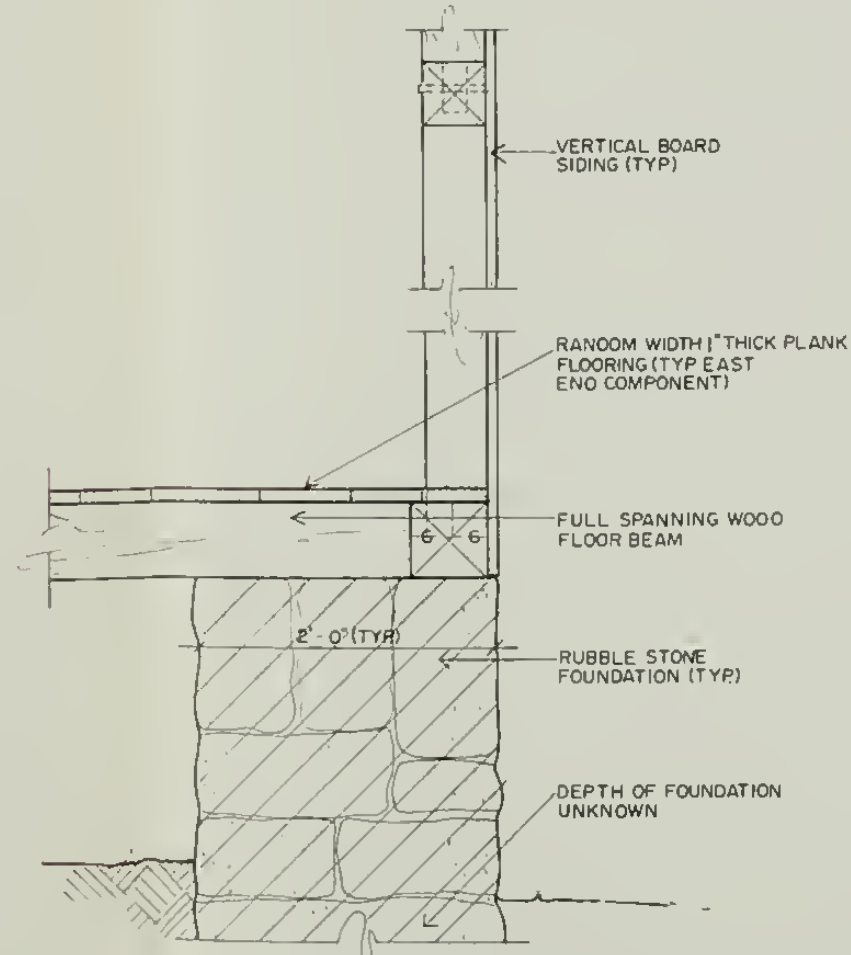
ELEVATION

KNEE BRACE FRAMING DETAIL

SCALE: 1 1/2" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

A
22



SECTION

FOUNDATION DETAIL

SCALE: 1 1/2" = 1'-0"

1 0 1 2 3 4 5 6 7 8 9 10
SCALE IN FEET

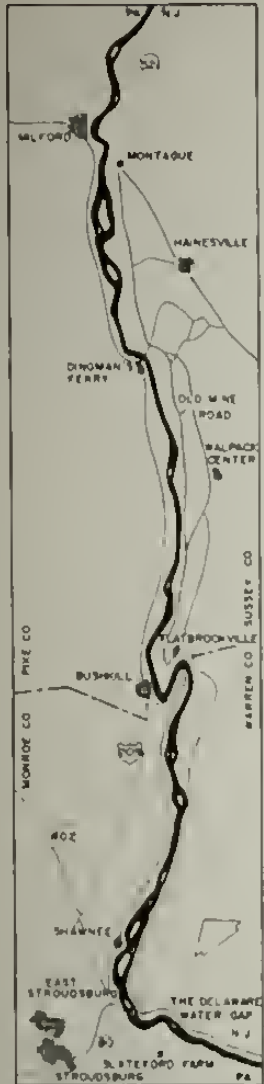
B
22

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN CAMARENA BENNETT		EXISTING CONDITION DRAWING	620
TECH. REVIEW BENNETT		WOODSHED - SECTIONS	25,012
DATE DEC /85		SLATEFORD FARM COMPLEX	PKG NO 111
		DELAWARE WATER GAP N.R.A.	SHEET 22
			OF 29

DATE DRAWING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO. 620 25,012
DESIGNED BY CHECKED BY REVIEWED BY DATE /85			PKG. NO. III SHEET 23 OF 29

SLATEFORD FARM – SPRINGHOUSE

THIS LITTLE TWO-ROOM STRUCTURE OF CUT STONE HAS A DATE STONE READING "P*T 1827." IT IS ONE STORY WITH A GABLE ROOF COVERED WITH SLATE QUARRIED ON THE PREMISES, AS ARE ALL BUILDINGS IN THE FARM COMPLEX. RIDGE TREATMENT ON THIS AND OTHER BUILDINGS IS HOME-MADE, CAST CONCRETE TILE.



DELAWARE RIVER VALLEY

0 1 2 3 4 5 SCALE IN MILES

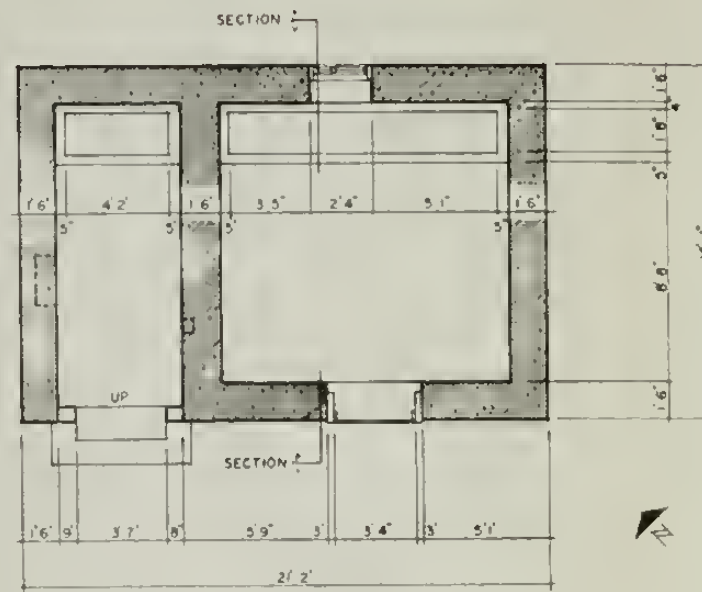


BUILDING KEY MAP

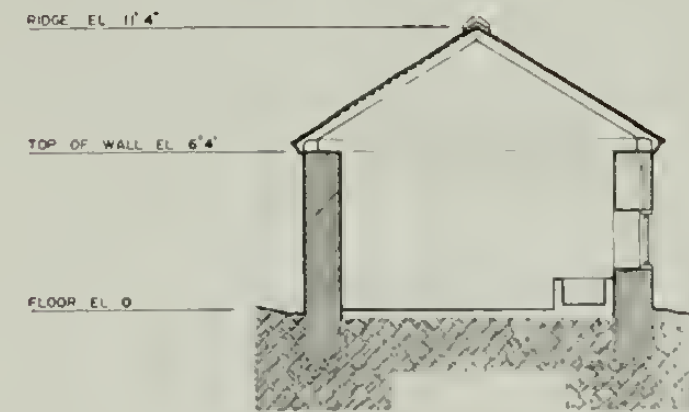
0 50 100 150
SCALE IN FEET
1" = 50'

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITIDN DRAWING INFDRMATIDNAL DIVIDER SLATEFDRO FARM COMPLEX DELAWARE WATER GAP N R A	DRAWING NO 620 25,012
DRAWN VARIDUS			
TECH. REVIEW BENNETT			
DATE DEC /85			
		PKG. NO. III	SHEET 23
			OF 29

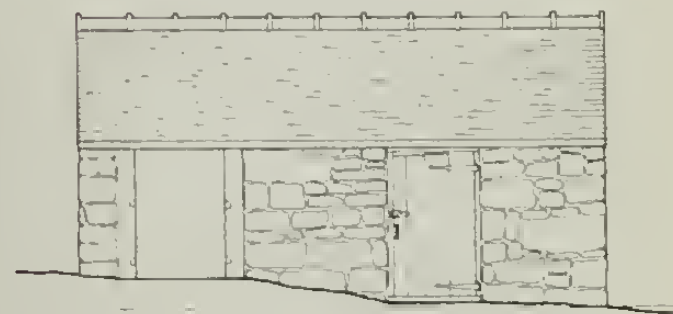
ED: TING	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
IOUS		EXISTING CONDITION DRAWING	620
REVIEW		SPRINGHOUSE-PLAN,ELEVATIONS,SECTION	25,012
NETT		SLATEFORD FARM COMPLEX	PKG. NO. 111
/85		DELAWARE WATER GAP N R A.	SHEET 24
			OF 29



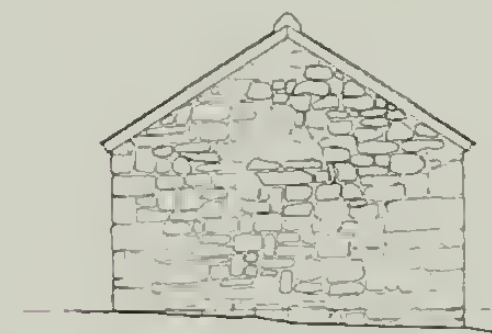
PLAN
SCALE 1/4" = 1'-0"



SECTION
SCALE 1/4" = 1' 0"



SOUTHWEST ELEVATION
SCALE 1/4" = 1' 0"



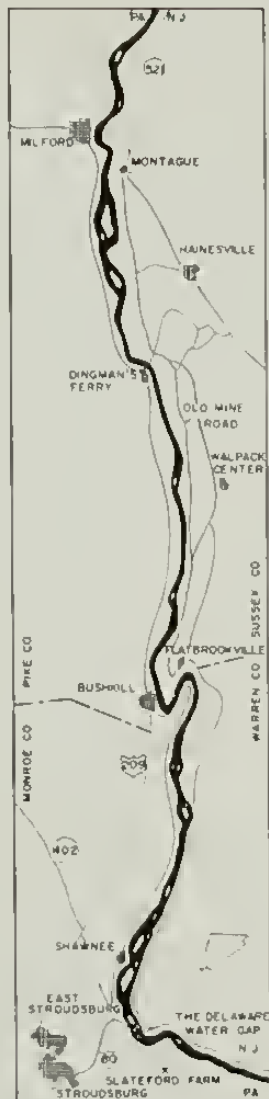
SOUTHEAST ELEVATION
SCALE 1/4" = 1' 0"



DESIGNED	SUB SHEET NO	TITLE OF SHEET	DRAWING NO
EXISTING		EXISTING CONDITION DRAWING	<u>620</u>
DRAWN:		SPRINGHOUSE-PLAN,ELEVATIONS,SECTION	<u>25,012</u>
VARIOUS		SLATEFORD FARM COMPLEX	PKG. NO.
TECH. REVIEW		DELAWARE WATER GAP N R A	III
BENNETT			SHEET
DATE			<u>24</u>
DEC / 85			OF <u>29</u>

D. TING DUS REVIEW JETT /85	SUB SHEET NO	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO.	
			620	
			25,012	SHEET
	PKG. NO.		III	25
			OF	29

SLATEFORD FARM — SLATE SHANTY

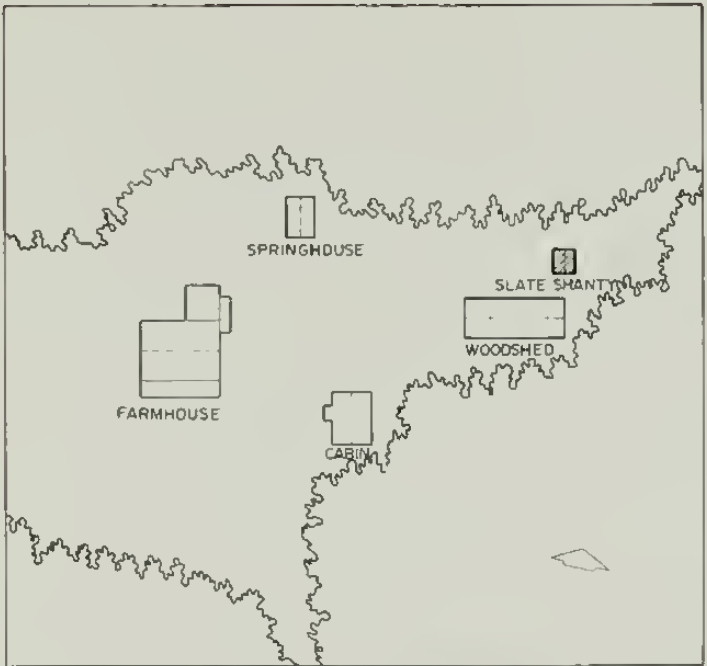


DELAWARE RIVER VALLEY

0 1 2 3 4 5 SCALE IN MILES

SLATE SHANTY

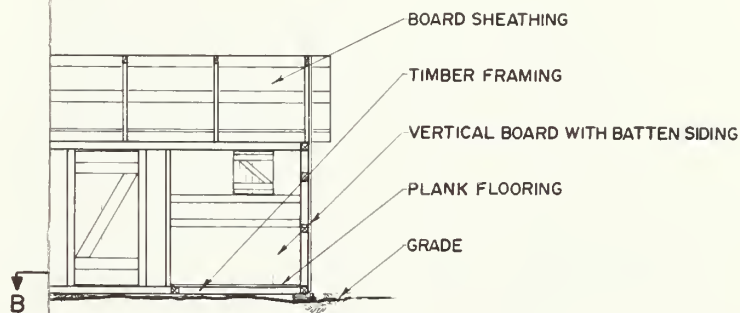
THIS 12-FOOT SQUARE WOOD FRAME, GABLE-ROOFED STRUCTURE WAS USED AS A MACHINE SHED FOR A SLATE MANUFACTURER IN BANGOR, PENNSYLVANIA. IT WAS MOVED TO THE SITE IN 1970 FOR INTERPRETIVE USE.



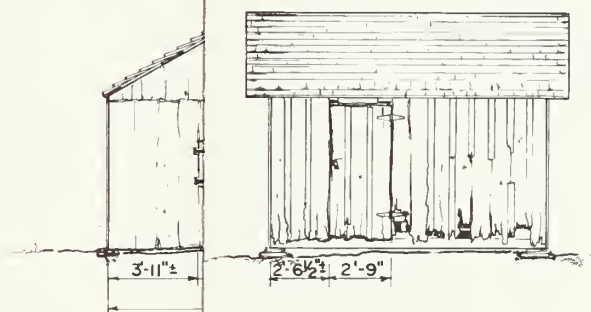
BUILDING KEY MAP

0 50 100 150
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER SLATEFORD FARM COMPLEX DELAWARE WATER GAP N R A	DRAWING NO 620 25,012	
DRAWN VARIOUS			PKG NO 111	SHEET 25
TECH. REVIEW BENNETT			OF 29	
DATE DEC /85				



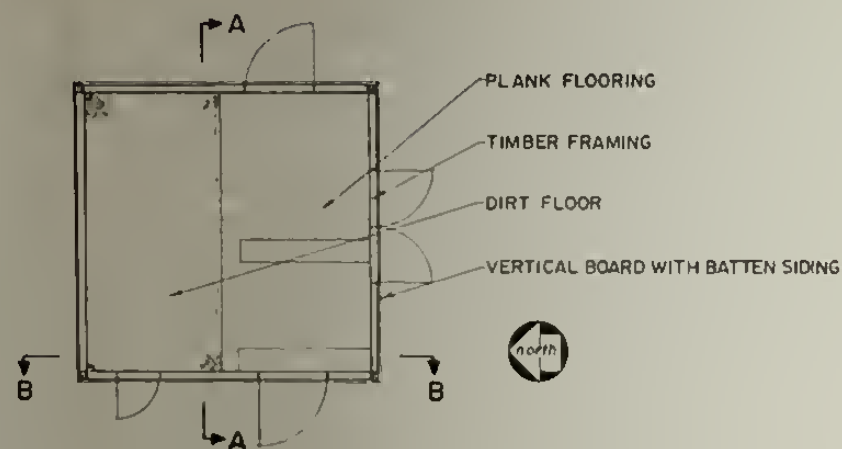
LONGITUDINAL SECTION B-B



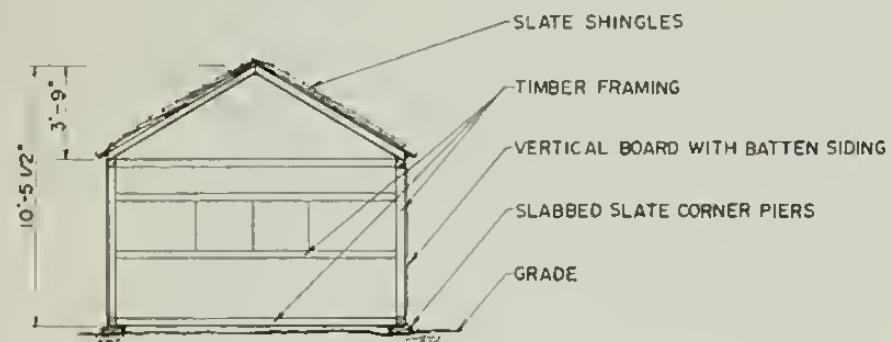
NORTH WEST ELEVATION

SCALE: 1/4" = 1'-0" 0 1 2 3 4 5 6 7 8 FT.

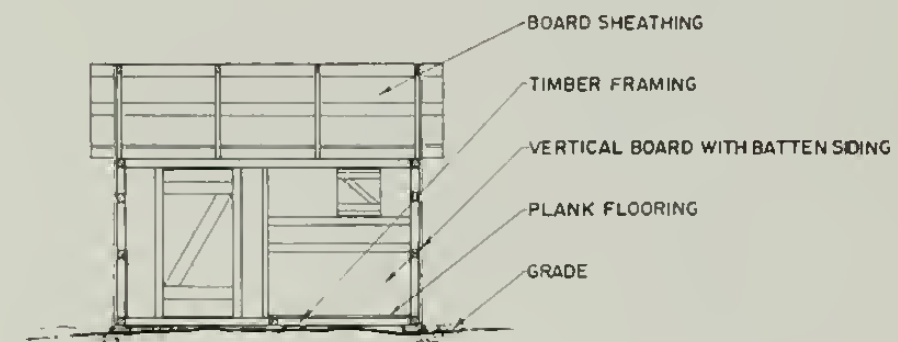
D.	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
TING		EXISTING CONDITION DRAWING	620
ARENA		SLATE SHANTY - PLAN, ELEVATION	25,012
REVIEW		& SECTIONS	PKG. NO. III
ETT		SLATEFORD FARM COMPLEX	26
/85		DELAWARE WATER GAP N.R.A.	OF 29



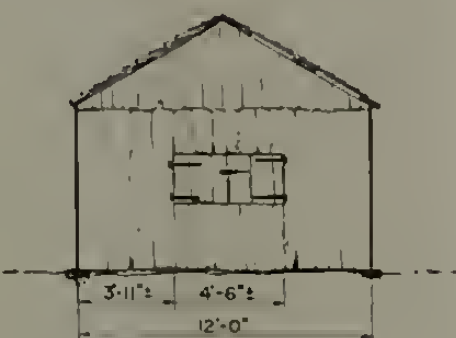
PLAN



TRANSVERSE SECTION A-A



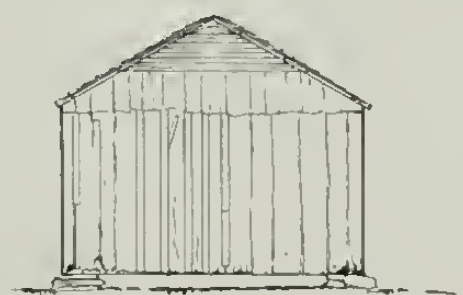
LONGITUDINAL SECTION B-B



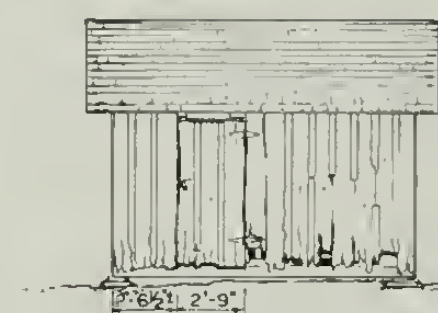
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

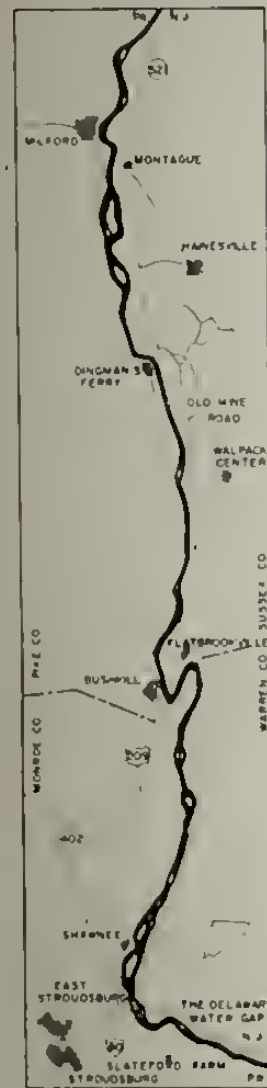
SCALE: 1/4" = 1'-0" 0 1 2 3 4 5 6 7 8 FT

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING	DRAWING NO. 620
DRAWN. CAMARENA		SLATE SHANTY - PLAN, ELEVATION	25,012
TECH. REVIEW BENNETT		& SECTIONS	PKG. NO. III
DATE DEC /85		SLATEFORD FARM COMPLEX	SHEET 26
		DELAWARE WATER GAP N R A	OF 29

ED	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.	
TING			620	
IOUS			25,012	
REVIEW			PKG. NO.	SHEET
NETT			III	27
/85			OF	29

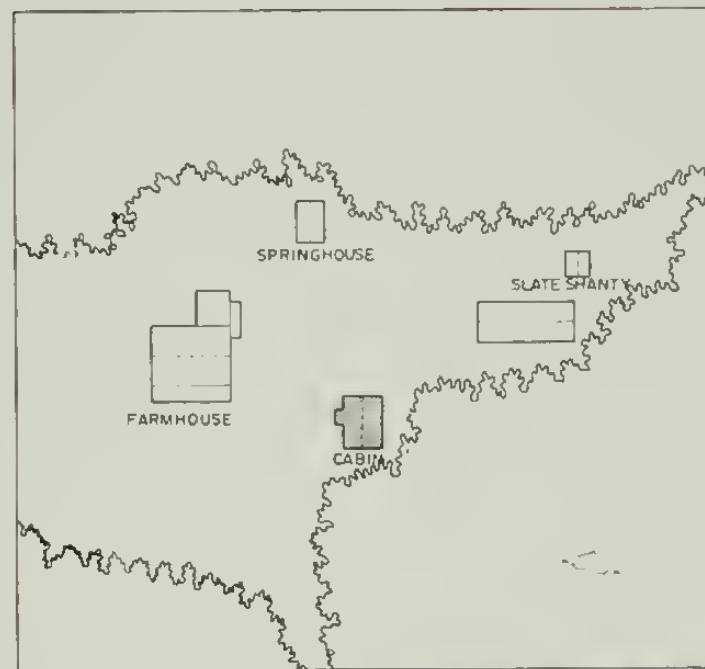
SLATEFORD FARM - CABIN

THIS SMALL ONE AND ONE-HALF STORY FRAME STRUCTURE MAY HAVE BEEN THE ORIGINAL HOUSE ON THE PROPERTY, DATING FROM THE 1820's. THE DWELLING CONSISTS OF TWO ROOMS AND A LOFT, WITH CLAPBOARD SIDING. THE LARGE WALK-IN FIREPLACE WITH ORIGINAL PLAIN BRACKET MANTEL REMAINS.



DELAWARE RIVER VALLEY

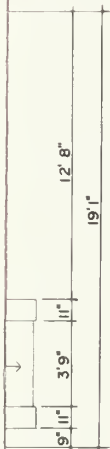
0 1 2 3 4 5
SCALE IN MILES



BUILDING KEY MAP

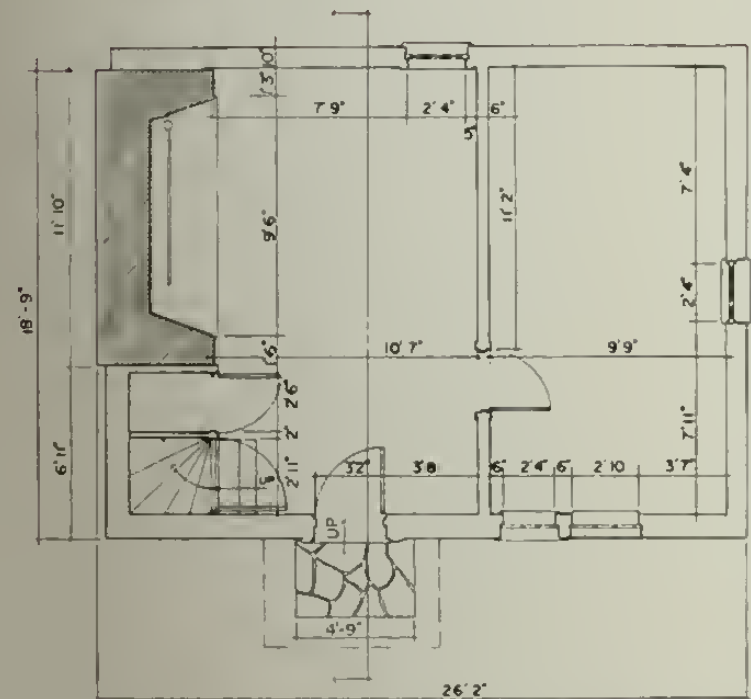
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SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING INFORMATIONAL DIVIDER SLATEFORD FARM COMPLEX DELAWARE WATER GAP N R A	DRAWING NO. 620 25,012	
DRAWN VARIOUS			PKG. NO. 111	SHEET 27
TECH. REVIEW				
BENNETT				
DATE DEC /85				OF 29

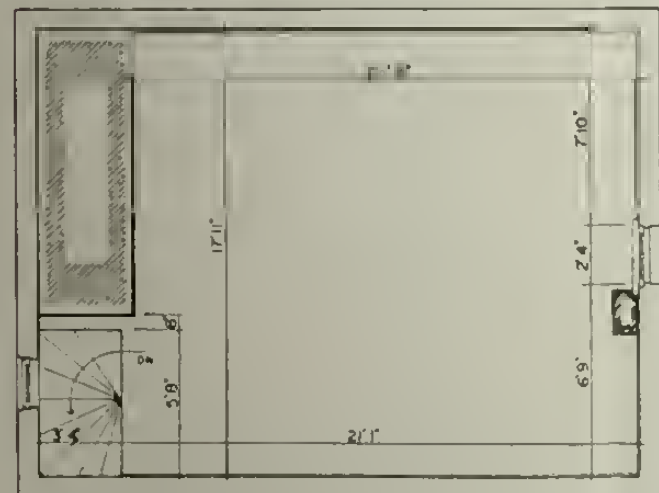


0 1 2 3 4 5
SCALE IN FEET

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TING		EXISTING CONDITION DRAWING	620
OUS		CABIN - FLOOR PLANS & SECTION	25,012
REVIEW		SLATEFORD FARM COMPLEX	PKG. NO. III
NETT		DELAWARE WATER GAP N.R.A.	SHEET 28
/85			OF 29



FIRST FLOOR PLAN
SCALE $\frac{1}{8}'' = 1'-0''$



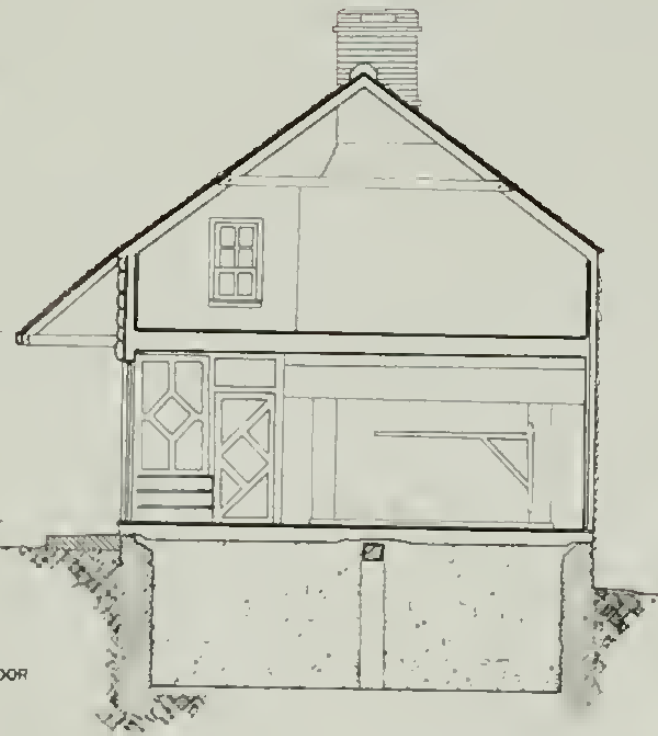
LOFT FLOOR PLAN
SCALE $\frac{1}{8}'' = 1'-0''$

TOP RIDGE
EL. 17'9"

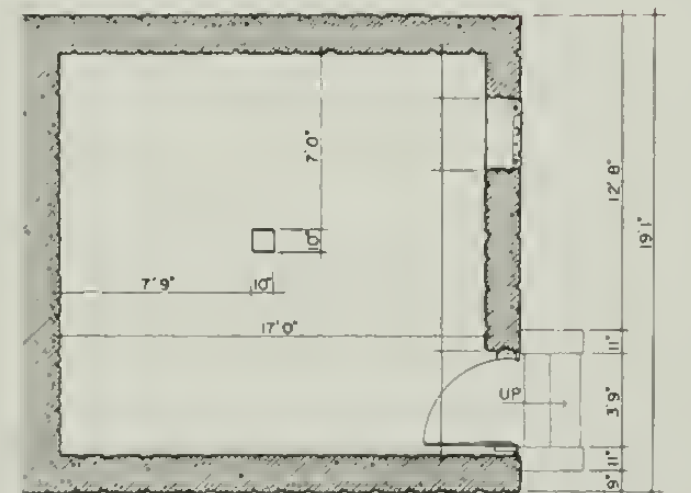
LOFT FLOOR
EL. 7'7"

FIRST FLOOR
EL. 0

BASEMENT FLOOR
EL. -6'7"



SECTION
SCALE $\frac{1}{8}'' = 1'-0''$



BASEMENT PLAN
SCALE $\frac{1}{8}'' = 1'-0''$

0 1 2 3 4 5
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING	DRAWING NO. 620
DRAWN VARIOUS		CABIN - FLOOR PLANS & SECTION	25,012
TECH. REVIEW BENNETT		SLATEFORD FARM COMPLEX	PKG NO. 111
DATE DEC /85		DELAWARE WATER GAP N R A.	SHEET 28
			OF 29

1 2 3 4 5
SCALE IN FEET

ED: TING	SUB SHEET NO	TITLE OF SHEET	DRAWING NO.
		EXISTING CONDITION DRAWING	620
OUS		CABIN - ELEVATIONS	25,012
REVIEW:		SLATEFORD FARM COMPLEX	PKG. NO.
NETT		DELAWARE WATER GAP N R. A.	III
/85			SHEET
			29
			OF 29

EXISTING ROOF SADDLE

PRECAST CONCRETE COMB

CLAPBOARD SIDING

EVIDENCE OF SPLASH BACK
OR RISING DAMP AT THIS
AREA



WEST ELEVATION

SCALE $\frac{1}{4}'' = 1'-0''$

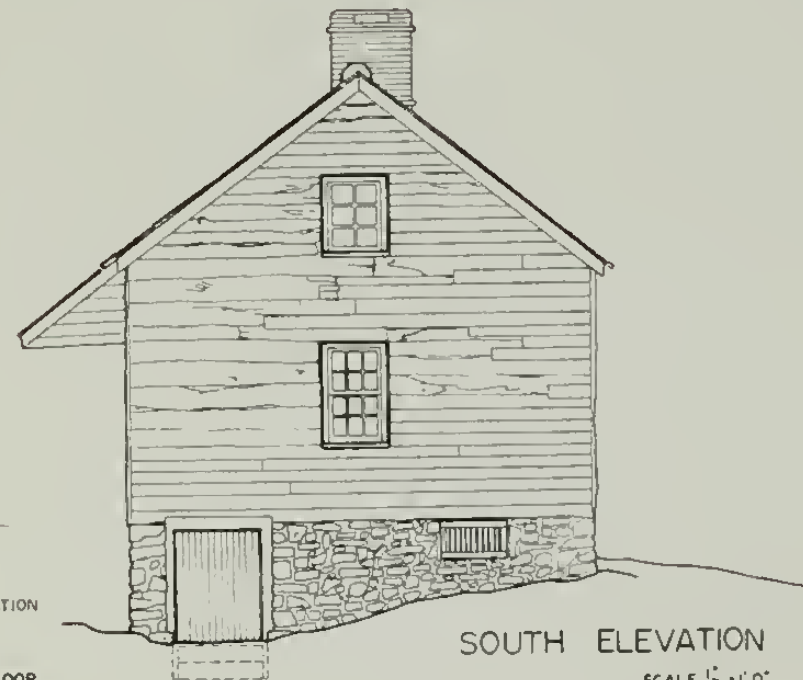
TOP RIDGE
EL 17'-9"

LOFT FLOOR
EL 7'-7"

FIRST FLOOR
EL 0

STONE FOUNDATION

BASEMENT FLOOR
EL -6'-7"

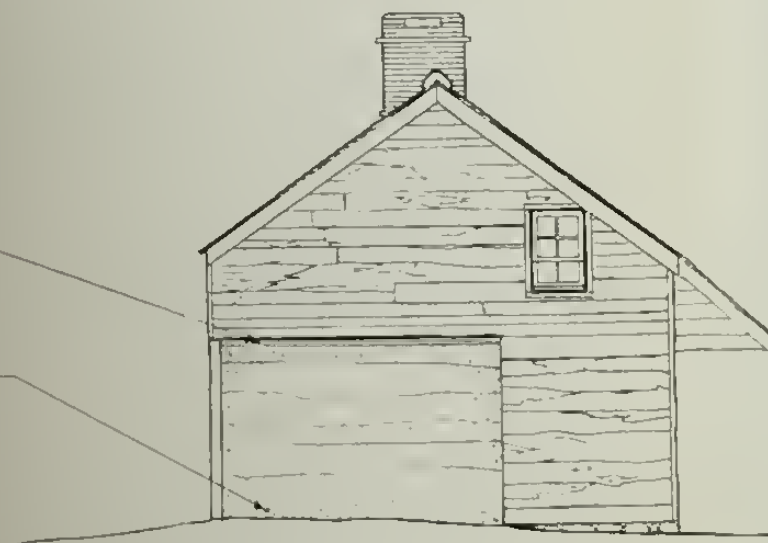


SOUTH ELEVATION

SCALE $\frac{1}{4}'' = 1'-0''$

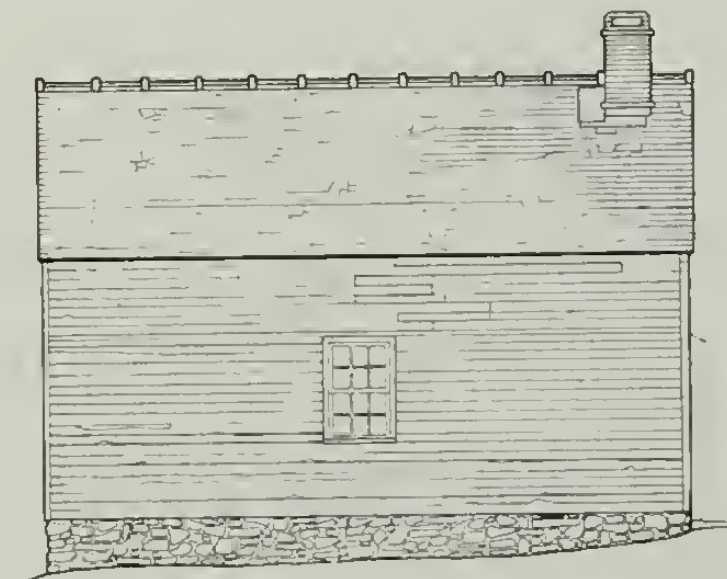
METAL FLASHED DRIP

EVIDENCE OF RISING DAMP



NORTH ELEVATION

SCALE $\frac{1}{4}'' = 1'-0''$



EAST ELEVATION

SCALE $\frac{1}{4}'' = 1'-0''$

0 1 2 3 4 5
SCALE IN FEET

DESIGNED EXISTING	SUB SHEET NO.	TITLE OF SHEET EXISTING CONDITION DRAWING CABIN - ELEVATIONS SLATEFORD FARM COMPLEX DELAWARE WATER GAP N.R.A.	DRAWING NO 620 25,012
DRAWN: VARIOUS			
TECH. REVIEW BENNETT			
DATE DEC /85			
			PKG. NO. 111
			SHEET 29
			OF 29

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APPENDICES

APPENDIX A

STRUCTURAL ANALYSIS SECTION

BUILDING DESCRIPTION

The farmhouse is a two-story building consisting of the main house body and the kitchen ell. The main house body is approximately 30 feet by 40 feet and the kitchen ell is approximately 17 feet by 18 feet. A 9 foot wide porch runs along the south side of the farmhouse. A smaller porch, approximately 5 feet wide by 17 feet long, protects the exterior kitchen door on the east side of the building. The structural system consists of stone foundation walls and wood framed floors, walls, and roofs.

Perimeter foundation walls of the main house body are of mortared stone approximately 15 inches thick. The north foundation wall bears directly on bedrock which forms the lower half of this particular wall. A stone wall approximately 21 inches thick bisects the cellar and provides support for the interior bearing wall above.

The kitchen ell foundation walls are also stone, approximately 15 inches thick and probably key into the main house body's foundation walls at two locations.

Foundation walls for the south porch are stone covered by cement parging. The porch floor is a concrete slab on grade and supported on three sides by the foundation walls.

First floor framing for the main house body consists primarily of log joists 24 inches on center. The log joists span 14 feet, 6 inches and bear on the foundation wall and the center stone wall. Beneath a central main entry hall, are 3 inch x 8 inch joists 24 inches on center. These rectangular joists span 8 feet 6 inches and are connected to a log joist at each end by a mortise and tenon joint.

The second floor framing consists of 2-7/8 inch x 9 inch joists 16 to 18 inches on center and spanning 14 feet, 6 inches. The joists bear at one end on a longitudinal summer beam and at the other end on the exterior walls. The 8 inch x 8 inch summer beam spans 8 feet, 6 inches across this main entry hall and is supported at each end by the interior bearing wall.

The garret floor framing is similar to the second floor framing, except the floor joists are spaced 18 to 20 inches on center, and the summer beam is 8 inches x 11 inches.

The main house body roof framing consists of 3 inch x 5 inch rafters 24 to 26 inches on center. The rafters are approximately 16 feet long and are joined at the peak of the roof by pinned mortise and tenon joints. On each side of the gable a 6 inch x 6 inch crib beam runs longitudinally under the rafters, thereby reducing the maximum rafter span to 11 feet. The longitudinal crib beams span each roof plane in three segments, the longest of which is 15 feet. These crib beams are supported by a transverse timber crib framework positioned on either side and parallel to the stairway, and also at the exterior walls (see illustration 7).

Kitchen ell floor framing consists of 3½ inch x 4½ inch joists, 24 inches on center and spanning 16 feet. These joists were measured in the concrete subcellar at the north end of the kitchen ell and are assumed typical for the entire floor. The remainder of the kitchen ell floor framing is inaccessible.

The kitchen ell roof framing consists of 2 inch x 5½ inch joists, 24 inches on center and spanning 10 feet. The joists are supported approximately 8 feet from the main house body north wall by a 2½ inch x 6½ inch transverse beam. The transverse beam is supported by 1 inch x 8 inch vertical framing at approximately 4 feet on center and bearing on a 4 inch x 8 inch beam.

South porch roof framing consists of 1-3/4 inch x 5-3/4 inch joists, 24 inches on center. The joists span 8 feet and are supported by a 1-3/4 inch x 5-3/4 inch ledger, which is embedded into the stucco, and by a spandrel beam. The spandrel beam is 3½ inches x 5-3/4 inches and is supported by 12 inch x 12 inch unreinforced parged concrete columns. Each spandrel beam spans 12 feet 10 inches and has no visible lateral restraint at the bearing points.

The east porch roof framing is an unusual arrangement of 1-3/4 x 3½ inch joists. See the roof framing plan for details.

The north and south exterior walls, and the center interior wall of the main house body are bearing walls and provide support for gravity loads. The north exterior wall of the kitchen ell is also a bearing wall.

Framing for the stairway consists of three 2 inch x 14 inch stringers, 21 inches on center. The horizontal span of the stringers is approximately 12 feet, 6 inches. Each stringer is connected to the stairway header by three wrought iron nails. The stairway header is inaccessible and will require demolition of historic fabric before any assessment on its condition can be made.

EXISTING STRUCTURAL CONDITION

Generally the foundation of the main house body is in good condition. Cracks in the bedrock portion of the exterior foundation wall allow a varied flow of spring water to enter the cellar and accumulate on the cellar floor. No system is currently in place for removing this water.

The center foundation wall is in good condition.

The visible portion of the kitchen ell foundation wall is in good condition. Water which appears to be seeping in around the cellar floor slab is probably resulting from subsurface spring action. At time of inspection approximately 1 inch of water was standing on the subcellar floor.

Foundation vents on the east and west sides of the main house body are covered with vegetation.

The sill plates along the north wall of the main house body and kitchen ell are decayed. Exterior stucco finish shows evidence of rising damp along the entire north wall. Deterioration may extend up to the lower ends of the tenoned vertical wall framing members. These problems are related to the topography on the north side of the house which slopes surface drainage toward the building.

The southeast corner of the south porch is in poor condition. Cement parging at this location is severely cracked and has started to spall.

First floor framing is in generally good condition, however, the log joists are separated from the perimeter sill plate by approximately 3 to 4 inches. It appears the log joists were originally installed this way. Powder post beetle holes were noted in many log joists.

Second floor framing is in good condition.

The garret floor framing is in good condition. However, a problem does exist where three garret floor joists were cut just inside of the heel joint with the rafter in order to facilitate installation of the stairway. The resulting joints between rafters and discontinuous joist stubs were not securely attached to the wall plate and this allowed the joist stubs to rotate and lift from their bearing at the inside of the plate.

Roof framing for the main house body is in generally good condition. Some of the pins are missing from the mortise and tenon joints at the roof peak, and three sets of rafters are not joined completely at the peak. Since there is no noticeable deflection in the ridge line of the main house body, it appears that these members were probably installed this way.

The accessible portion of the kitchen ell floor framing is in generally good condition. Powder post beetle exit holes were noted in all of the inspected floor joists.

Roof framing for the kitchen ell is in good condition.

The south porch roof framing is in fair condition. Several of the roof joists have been damaged by water leaking through, as has some of the roof sheathing. Joist ends are decayed due to the absence of a drip edge along eaveline. The spandrel beam has deflected 1 to $\frac{1}{2}$ inches at mid-span in both the east and west ends of the porch. The slab on grade floor is cracked and shows signs of differential settlement, as much as 1 inch in some places.

The east porch framing is in good condition.

The stairway framing is in good condition.

The chimney on the north side of the kitchen ell is in poor condition. Its brick foundation has been undermined and the chimney has rotated away from the exterior wall approximately 2 inches at the eave. This movement has caused severe damage to the stucco and has allowed water to penetrate behind the stucco.

Overall, the farmhouse is in good structural condition.

LOAD BEARING ANALYSIS

Minimum floor and roof live loads from the 1984 BOCA Basic National Building Code will be used for comparison with allowable values per analysis.

Minimum Floor and Roof Live Loads For Proposed Occupancy
Per BOCA 1984

<u>Location</u>	<u>Proposed Occupancy or Use</u>	<u>Minimum Live Load (PSF)</u>
First Floor	Public	100
Second Floor	Public	100
Garret Floor	Storage	25
Kitchen Ell Floor	Public	100
Main House Body Roof		16
Kitchen Ell Roof		20
South Porch Roof		16
East Porch Roof		16
Stairway	Public	100

The floor and roof load analysis is summarized in the table below:

Floor and Roof Load Analysis
Slateford Farm Farmhouse

<u>Location</u>	<u>Allowable Total Load (PSF)</u>	<u>Existing Dead Load (PSF)</u>	<u>Allowable Live Load (PSF)</u>
First Floor	17	6	11
Second Floor	45	15	30
Garret Floor	41	15	26
Kitchen Ell Floor	9	6	3
Main House Body Roof	13	7	6
Kitchen Ell Roof	37	11	26
South Porch Roof	22	6	16
East Porch Roof	22	6	16
Stairway	28	7	21

The following conclusions can be made by comparing the allowable live loads with the minimum live load requirements:

- 1) The first floor framing for the main entry hall does not meet the minimum live load requirement. Load carrying capacity for this portion of the floor is limited by the tenoned ends of the rectangular joists which frame it. The log joists which frame the floor for the rooms on either end are adequate.
- 2) The second floor framing does not meet the minimum live load requirement. In this case, the mortise and tenon connection between the floor joists and a center summer beam limits the load carrying capacity of the entire floor. Also, the summer beam itself is inadequate by today's design standards.
- 3) Garret floor framing is adequate.
- 4) The kitchen ell floor framing does not meet the minimum live load requirement. The floor joists are grossly inadequate.
- 5) The main house body roof framing does not meet the minimum live load requirement. Both the rafters and the longitudinal crib beams are inadequate by today's design standards.
- 6) Kitchen ell roof framing is adequate.
- 7) South porch roof framing is adequate.
- 8) East porch roof framing is adequate.
- 9) The stairway does not meet the minimum live load requirement. The framing is adequate, however, the stringer-header connection limits the load carrying capacity of the stairway.

RECOMMENDATIONS

Based on the existing structural condition of the farmhouse, the following recommendations are made:

- 1) Install a drainage system to remove the water which accumulates in the cellar. This can be accomplished by installing a trench drain in the cellar floor along the north foundation wall. Water can then be removed from the trench drain by a sump pump connected to a discharge pipe which can be daylighted on the east side of the farmhouse. Another option, to exclude mechanical dependency, would be to provide a gravity-flow discharge piping system, provided subsurface rock formations can comfortably accommodate an extended drainage leader sloped to daylight.
- 2) Remove the vegetation covering the foundation vents on the east and west sides of the farmhouse.
- 3) Repair the damaged sill plate on the north wall by either partial replacement or epoxy consolidation. This will require removal of a portion of the stucco, clapboard, and interior finishes. The wall framing may also require localized repairs.
- 4) Regrade on the north side of the farmhouse to provide positive drainage away from the building.
- 5) Repair the south porch. Remove the existing parging from the entire porch foundation wall and apply new parging. Remove the existing slab on grade floor, properly compact the fill, and install a new slab on grade. Leave the existing columns intact and replace the damaged rafters and roof sheathing.
- 6) Install pins, where missing, in the mortise and tenon joints of the main house body roof rafters. An alternative is to install collar ties.

7) Stabilize the chimney on the north side of the kitchen ell by installing a reinforced concrete footing and reconstructing the chimney.

8) Install a system to facilitate roof drainage.

9) Install clip angles on both sides of the cut-off garret floor joists to prevent further movement.

Based on the load-bearing analysis, and the proposed use, the following recommendations are made:

1) Strengthen the first floor framing. This can be accomplished by reinforcing the joist mortise and tenon joints and by installing columns beneath the four primary log joists that double as headers for the rectangular joist framing. The alternative to strengthening the framing is to limit the number of occupants on the first floor.

2) Strengthen the second floor framing by reinforcing the joist and summer beam connection and by installing scab plates on both sides of the summer beam. This will require removal of some historic fabric. The alternative to strengthening the framing is to limit the number of occupants on the second floor.

3) Strengthen the kitchen ell floor framing by installing supplemental floor joists or by installing columns beneath the floor joists at midspan. This will also require removal of some historic fabric. The alternative to strengthening the framing is to limit the number of occupants on the kitchen ell floor.

4) Supplement the roof rafters and longitudinal roof beams with additional members.

5) Reinforce the stairway stringer-header connection. Destructive investigation is required to determine the size and condition of the header.

ANCILLARY BUILDINGS

A cursory inspection of the woodshed, springhouse, slate shanty, and cabin was performed.

Woodshed

A few framing members, such as timber posts, knee bracing, and floor beams are missing from the woodshed. Also, several existing framing members are decayed.

The woodshed foundation, which is stone rubble, is in poor condition. Several stones are missing, creating large voids in the foundation wall.

New diagonal bracing has been installed transversely between posts in the west section of the building. Also, the existing roof framing in the west section has been supplemented by new 2 x 4's.

Overall the woodshed is in poor structural condition.

Based on the existing structural condition, the following recommendations are made:

- 1) Install new framing members at locations of missing framing members.
- 2) Replace decayed framing members or consolidate by epoxy injection.
- 3) Reconstruct the foundation.
- 4) Regrade to provide positive drainage away from the north side of the woodshed.

Springhouse

The intermediate stone wall of the springhouse has several large vertical cracks throughout. The wall has a large bulge at mid-height. The cause of the movement appears to be some sort of foundation failure. The concrete slab on both sides of the wall is also severely cracked.

There are sags in both the ridge and eave lines of the springhouse, indicating an inadequate roof framing system. Several of the half-log rafters are decayed and one rafter has failed. There is no ridge beam.

The stone lintel above the window on the east side of the springhouse appears to have been temporarily stabilized.

Overall, the springhouse is in poor structural condition.

Based on the existing structural condition, the following recommendations are made:

- 1) Dismantle the intermediate stone wall, stabilize the supporting soil, construct a new concrete footing, and reconstruct the masonry wall.
- 2) Replace the concrete slab.
- 3) Replace the decayed and failed half-log rafters.
- 4) Install supplemental roof framing and a ridge beam and/or collar ties.
- 5) Stabilize the east window lintel by providing adequate bearing.
- 6) Regrade to provide positive drainage away from the north, west, and possibly south sides of the springhouse.

Slate Shanty

The roof framing of the slate shanty appears to be adequate. The existing rafters are spaced about 3 feet apart. Sags in the ridge line and deflections in the roof decking indicate the rafter spacing is too great.

The sill beam on the south side is decayed. Also, an interior floor sill beam is decayed and has failed.

Overall, the slate shanty is in fair condition.

Based on the existing structural condition, the following recommendations are made:

- 1) Supplement the existing roof framing by installing new rafters in the form of date-marked, dressed lumber between and adjacent to the existing rafters.
- 2) Replace the decayed sill beam and floor beam.

Cabin

The framing of the cabin is in good condition. Collar ties have been installed on the existing roof framing.

Based on the existing structural condition, the following recommendation is made:

Regrade to provide positive drainage away from the north side of the cabin.

This appendix was written by Larry L. Reynolds, Structural Engineer, Denver Service Center.

APPENDIX B
ELECTRICAL ANALYSIS SECTION

EXISTING CONDITIONS

The existing electrical systems for the farmhouse are old and deteriorated.

A pole-mounted transformer supplies 120/140 volt single phase service with a 100 amp meter mounted outside on the southwest wall and supplied by an aerial line. The service enters the building through the basement and supplies on old 60 amp fuse-type panelboard.

The internal branch circuits are in 1/2 inch metal conduit. The conduit is exposed in the basement, kitchen, and part of the attic. Conduit in the other areas of the house is concealed within the framework. The wiring has deteriorated and the conduit has rusted through in several places.

The telephone service is aerial to the house and enters through the kitchen wall, with a single telephone in the kitchen.

Illumination is provided by natural light and several incandescent light fixtures. Exterior lighting is accomplished by pole-mounted floodlights.

Lightning protection is necessary to minimize the threat of casual fire damage associated with those seasonal electrical storms experienced in this region. Air terminals should be installed at the higher features of the farmhouse to ensure a "cone of coverage" exists over the entire structure. The existing receptacles are 15 ampere, 120 volt, non-grounding type throughout the building.

There is a single intrusion alarm in the farmhouse comprised of one contact on the stile of the kitchen/dining room door. When illegal entry is detected by the pressure-release contact prong, an alarm signal is

simultaneously transmitted to park headquarters through a battery-powered transmitter and antenna system situated within the attic space. An alarm, over-ride shutoff switch, partially hidden, is mounted inside an accessible base cabinet in the kitchen ell. There are no smoke or fire alarms in the house.

Recommendations

The electrical service appears to be of sufficient size for current limited use and could be expanded if required. If pumps or other mechanical equipment are added to the house, then the service may have to be expanded. A new circuit breaker panelboard should be installed in place of the existing fuses. Placing the power feedline underground could be a problem because the bedrock in the area is near the surface.

The existing branch circuits should be removed and replaced with new wiring. Because not all rooms have power and only the hallways have lighting fixtures, new receptacles and lighting may need to be added for prospective displays, depending upon the forthcoming building use program.

For safety reasons a fire detection/alarm system should be installed. Such a system could consist of either "rate of rise" and/or "ionization" type of detectors.

Also needed is the installation of a more complete intrusion detection/alarm system. The system could be a combination of magnetic contacts attached to the exterior windows and doors and infrared detectors in the hallways and stairways. The selected system would need to be compatible with the park's newly upgraded security system.

This appendix was prepared by Greg J. Loosmore, Electrical Engineer, Denver Service Center.

APPENDIX C

SANITATION ANALYSIS

EXISTING CONDITIONS

Potable water and operable restroom facilities are not presently available at the Slateford Farmhouse. There are disconnected fixtures (one lavatory, one toilet, one bathtub) in a non-operable bathroom on the second floor level of the farmhouse. This single room facility could probably be rehabilitated to meet the future limited use needs, although provision of such a facility could have adverse environmental consequences.

Alternatives

There are two feasible opportunities for provision of potable water: bottled or well water. Running water could be obtained either from existing wells or from a newly drilled well within the site vicinity. In order to meet health standards, the well water would require disinfection and possible chemical treatment. Although bottled water would only provide for limited consumption needs, it would preclude the need to install elaborate chemical treatment equipment.

Reactivation of the existing restroom facilities would require some type of newly introduced storage or treatment system. One alternative to avoiding extensive environmental impact associated with a discharge soil absorption method would be the installation of vault toilets or clivis multrum units that generate no discharge flow. These systems require no running water to operate. The waste materials from these two types of units are stored in a holding tank for later disposal at another location.

As a general requirement, sanitation needs would make it necessary to provide for handwashing capability. The addition of a holding vault or soil absorption system would be necessary to meet this requirement.

Impact Considerations

Standard handling of waste materials generated by the reactivation of existing fixtures would dictate some form of on-site treatment. On-site treatment by ground absorption requires a relatively flat land area with adequate soil conditions. Preliminary soil data indicates soils in this area may not be acceptable for this purpose. This may make the retention of waste materials necessary. Storage of such waste requires large capacity of tanks and periodic removal by truck for off-site disposal.

To avoid visual and possibly structural impacts, an option to immediate on-site storage would be to pump wastewater to a nearby newly designed facility. However, the construction cost of running the pipe to connect to this facility and the accompanying environmental impact would need further assessment as to viability.

Recommendations

It is obvious that some type of facility is required to accommodate both the needs of the park staff and the visitors in and around the farm complex. Because a new restroom facility is proposed to be situated 250 yards southwest of the Slateford Farm Complex, this facility could satisfy the farmhouse restroom requirements with little inconvenience to visitors and park staff. The new facility will have running water, flush toilets, and an adequate wastewater treatment system.

In conclusion, considering both the cost and environmental impacts, the recommendations are as follows:

- 1) To provide bottled water at the farmhouse.
- 2) To use the new restroom facilities that will be located adjacent to the new parking lot for both visitor and staff needs.

This appendix was prepared by Michael D. Williams, Civil Engineer, Denver Service Center.

APPENDIX D
LANDSCAPE ANALYSIS SECTION

GENERAL DESCRIPTION OF EXISTING FEATURES

Topography and Soils

Slateford Farm complex is on the southeast facing slope of Mount Minsi at an elevation of 700 feet above sea level. The immediate farmhouse vicinity is on relatively gentle slopes of 2-6 percent. Some steeper slopes span across the site directly upslope from the farm complex. Downslope from the farmhouse and its ancillary buildings is an area of historic field terracing and flatter slopes. Topography is a somewhat limiting factor for pedestrian and handicap accessibility. The area is on moderately stony to extremely stony soils with outcroppings of shale strata immediately below site grades.

Drainage

There are a number of drainage problems that create wet areas in the vicinity of the farm site. These areas present some specific problems to the site. First, the farmhouse is situated on a poorly drained site, collecting surface drainage on the north side of the building (see illustration 10). This situation is creating some structural problems as discussed earlier in the report. Second, drainage occurs through the center of the building complex. Here, however, an existing culvert alleviates some of the potential wetness problem for visitor convenience. Finally, drainage swales and wet areas are a problem along the foot path to the lime kiln.

Vegetation

Much of the surrounding area and former fields are overgrown by young hardwoods including oak, maples, tuliptree, cherry, beech, and hickory. The immediate farmhouse vicinity remains open and grass-covered. A small vegetable garden is east of the farmhouse.

Utilities

Presently, overhead electric lines run along the unpaved road to the pole at the farmhouse. This situation creates a visual intrusion on the historic scene.

Site Features

A number of features have been identified as areas of interest for the visitor to Slateford Farm (NPS 1983b). Providing both visitor access and a suitable historic scene for visitor satisfaction comprise the primary concerns for the site. The following is a discussion of each feature with regard to both primary and secondary concerns.

Farm Complex. Currently, a guided tour leads the visitor to the various buildings at the site. No paved walks exist to facilitate participation by physically disabled visitors in these tours. Also, visitors are required to walk on lawn areas, creating a potential maintenance problem as well as inconvenience to the visitor.

Slate Quarry. The historic quarry is not currently accessible to the public. There is no defined access to the site from the farm complex.

Lime Kiln. This interesting feature can only be partially reached by an unsurfaced trail from the farmhouse vicinity. Several wet spots interrupt the path and impede direct access to the kiln, creating further site circulation problems.

Fields. A significant 19th century historic terrace, roadbed, and stone culvert are in a former field area southeast of the farmhouse and downhill from the barn/garage foundation ruins (NPS 1985a). Much of the former fields are overgrown by young mixed species of hardwood, detracting from the historic, pastoral setting.

Views. The historic resource study on Slateford Farm (NPS 1985b) and the environmental assessment (NPS 1983a) both identified a historic view from the farmhouse porch. The view is now obstructed by vegetation.

PROPOSED TREATMENT

Paths

Several possible types of paths would be incorporated into the proposed site design. One type of path provides access from the proposed comfort station and parking lot to the farm site. It would be located mostly along an existing surfaced path. The proposed path would be surfaced with asphalt and graded within minimum standards to allow for handicapped accessibility. Other types of pathways would provide for site core circulation. The primary type would be a hard-surface treatment that would comfortably facilitate handicapped access without imposing major impact to the historic scene. An alternative measure would be the use of indigenous slate as a path material that in itself is compatible with the site's historic building materials and related interpretive activities. Such paths would lead the visitor and tour guides to individual buildings for interpretation. Also, an enlarged, terrace-like area should be considered at the slate demonstration site. This site enhancement would allow for group demonstrations as well as an interpretive station and panoramic overview of the farm complex. Two woodchip-surface-type paths should be incorporated to lead the visitor to the lime kiln and to the slate quarry. A bridge would be required over a wet area along the path to the kiln.

Grading

Some grading is necessary around the farmhouse to mitigate the damaging surface drainage. Also, minimal grading may be required along the path within the building group to meet federal accessibility standards.

Fields

Two treatments should be considered for the field area to expand and enhance the historic scene. The historic resource study suggests that hay crops and worm fencing are typical agricultural practices of the 19th century Pennsylvania farm. These could be incorporated into the field area.

View

The historic vista from the farmhouse to the river channel should be reestablished. A corridor of about three acres would need to be cleared to achieve the former view.

This appendix was prepared by Helen M. Starr, Landscape Architect, Denver Service Center.

PACKAGE ESTIMATING DETAIL SHEETS

PACKAGE ESTIMATING DETAIL

Page 1 of 6
for this packageUNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structure Report Addendum/Slateford Farm Complex

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
<u>Buildings and Utilities</u>		
1. Farmhouse	Lump Sum	\$159,000
2. Springhouse	"	30,100
3. Woodshed	"	38,000
4. Slate Shanty	"	6,800
5. Cabin	"	6,200
Package 111 Grand Total		\$240,100

B. Hinson 11/14/85

Note: Estimate valid thru FY-86

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE		
		<input type="checkbox"/> A Working Drawings	<input type="checkbox"/> B Preliminary Plans	<input checked="" type="checkbox"/> C Similar Facilities
Proj. Type		Totals from Above B & U R & T		
52	Museum Exhibits			XXXXX
55	Wayside Exhibits			XXXXX
62	Audio-Visual			XXXXX
39	Ruins Stabilization			XXXXX
91	Construction		\$240,100	
92	Utility Contracts			XXXXX
ESTIMATES APPROVED (Signature)		(title)		(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structure Report/Slateford Farmhouse

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
1 - Roof Repairs	LS	\$ 13,000
2 - South Elevation Repair	LS	9,000
3 - Stucco Repair	LS	26,000
4 - East Elevation Repair	LS	8,000
5 - North Elevation Repair	LS	16,000
6 - West Elevation Repair	LS	12,000
7 - Windows and Doors	LS	13,000
8 - Handicapped Access	LS	18,000
9 - Repair Floor Framing	LS	16,000
10 - Fire Alarm System	LS	13,000
11 - Electrical System	LS	15,000
	Total	\$159,000

Estimate valid thru FY-86

B. Hinson 11/14/85

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE	
		<input type="checkbox"/> A Working Drawings	<input type="checkbox"/> B Preliminary Plans
		<input checked="" type="checkbox"/> C Similar Facilities	
Proj. Type		Totals from Above B & U R & T	
52	Museum Exhibits		XXXXX
55	Wayside Exhibits		XXXXX
62	Audio-Visual		XXXXX
89	Ruins Stabilization		XXXXX
91	Construction	\$159,000	
92	Utility Contracts		XXXXX
ESTIMATES APPROVED (Signature)		(title)	(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structures Report/Slateford Spring House

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
1 - Roof Repair	LS	\$ 4,000
2 - Structural Repair	LS	18,500
3 - Windows and Doors	LS	1,600
4 - Regrade	LS	1,000
5 - New Whitewash	LS	5,000
	Total	\$30,100

Estimate valid thru FY-86

B. Hinson 11/14/85

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE	
		<input type="checkbox"/> A Working Drawings	<input type="checkbox"/> B Preliminary Plans
		<input checked="" type="checkbox"/> C Similar Facilities	
Proj. Type	Totals from Above B & U R & T		
52 Museum Exhibits			XXXXX
55 Wayside Exhibits			XXXXX
62 Audio-Visual			XXXXX
89 Ruins Stabilization			XXXXX
91 Construction	\$30,100		
92 Utility Contracts			XXXXX
ESTIMATES APPROVED (Signature)	(title)	(date)	

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structure Report/Slateford Wood Shed

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
1 - Roof Work	LS	\$12,000
2 - Doors and Windows	LS	1,000
3 - Wall Sheathing	LS	4,000
4 - Floor Repair	LS	4,000
5 - Structural Repair	LS	7,000
6 - Grading	LS	2,000
7 - Foundation	LS	8,000
	Total	\$38,000
Estimate valid thru FY-86		
B. Hinson 11/14/85		

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE	
		<input type="checkbox"/> A Working Drawings	<input type="checkbox"/> B Preliminary Plans
		<input checked="" type="checkbox"/> C Similar Facilities	
Proj. Type		Totals from Above B & U R & T	
52	Museum Exhibits		XXXXXX
55	Wayside Exhibits		XXXXXX
62	Audio-Visual		XXXXXX
89	Ruins Stabilization		XXXXXX
91	Construction	\$38,000	
92	Utility Contracts		XXXXXX
ESTIMATES APPROVED (Signature)		(title)	(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structure Report/Slateford Slate Shanty

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
1 - Roof Repair	LS	\$3,000
2 - Siding Repair	LS	2,000
3 - Doors and Windows	LS	800
4 - Foundation	LS	<u>1,000</u>
	Total	\$6,800

This estimate valid thru FY-86

B. Hinson 11/15/85

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE	
		A <input type="checkbox"/> Working Drawings	
		B <input type="checkbox"/> Preliminary Plans	
		C <input checked="" type="checkbox"/> Similar Facilities	
Proj. Type		Totals from Above	
		B & U	R & T
52	Museum Exhibits		XXXXX
55	Wayside Exhibits		XXXXX
62	Audio-Visual		XXXXX
89	Ruins Stabilization		XXXXX
91	Construction	\$6,800	
92	Utility Contracts		XXXXX
ESTIMATES APPROVED (Signature)		(title)	(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION Mid-Atlantic	PARK Delaware Water Gap NRA
PACKAGE NUMBER 111	PACKAGE TITLE Historic Structures Report/Slateford Cabin

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
1 - Roof Repair	LS	\$5,200
2 - Regrade	LS	<u>1,000</u>
		\$6,200
This estimate valid thru FY-86		
B. Hinson 11/15/85		

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE	
		<input type="checkbox"/> A Working Drawings	<input type="checkbox"/> B Preliminary Plans
		<input checked="" type="checkbox"/> C Similar Facilities	
Proj. Type		Totals from Above B & U R & T	
52	Museum Exhibits		XXXXX
55	Wayside Exhibits		XXXXX
62	Audio-Visual		XXXXX
89	Ruins Stabilization		XXXXX
91	Construction	\$6,200	
92	Utility Contracts		XXXXX
ESTIMATES APPROVED (Signature)		(title)	(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

MEMORANDUM, MARCH 4, 1986



United States Department of the Interior

NATIONAL PARK SERVICE

DENVER SERVICE CENTER

755 Parfet Street

P.O. Box 25287

Denver, Colorado 80225

IN REPLY REFER TO

DIE (DSC-TEA)

MAN

Memorandum**To:** Regional Director, Mid-Atlantic Region**From:** Assistant Manager, Eastern Team, Denver Service Center**Reference:** Delaware Water Gap, Package No. 111, Slatford Farm Pt 34+35**Subject:** Record of Planning Meeting

This is to record the discussion and recommendations of the meeting on the above referenced project held in Philadelphia on February 3, 1986. Attending the meeting were John Bond, Henry Magaziner, Chet Harris, Cliff Tobias, Ames Hawkins, Ben Richey, Harold La Fleur and Richard Wells.

It was agreed that the objectives to guide future development at the Slatford Farm site are: 1) the continued long term preservation of the farm house, 2) communication of the continuum of and changes historically occurring in farming lifestyles, agricultural and slate quarrying technology, and the economic and social aspects of recreation and tourism in the Poconos and Delaware Water Gap.

To best accomplish these objectives it was determined to remove the stucco from the farm house, repair the wood frame and siding, retain the kitchen ell in its present form, and retain the concrete front porch, unless further investigation proves this to be impossible or impractical.

The interior would be adaptively developed to house exhibits which might include some furniture. Currently available NPS funds (Pkg. 111, P.T.34) could be reprogrammed to prepare an exhibit plan.

We would appreciate your early advice if you concur with these decisions. This will expedite the work of our architects who are preparing preliminary and final construction drawings for the building.

/s/ Kenneth R. Keith, Jr.

Kenneth R. Keith, Jr.

cc:

MAR-P, Mr. Bond

MAR-FEP, Mr. Magaziner

MAR-ET, Mr. Harris

MAR-PH, Mr. Tobias

Supt., DSEA

DSC-TEA-Wells
DSC-TEA-PIFS
TEA:RWells:mlm:2/28/86-8867

MEMORANDUM, MARCH 20, 1986



United States Department of the Interior

NATIONAL PARK SERVICE

MID-ATLANTIC REGION
143 SOUTH THIRD STREET
PHILADELPHIA, PA. 19106

IN REPLY REFER TO:

D18(MAR-CRM)

Memorandum

To: Assistant Manager, Eastern Team, Denver Service Center

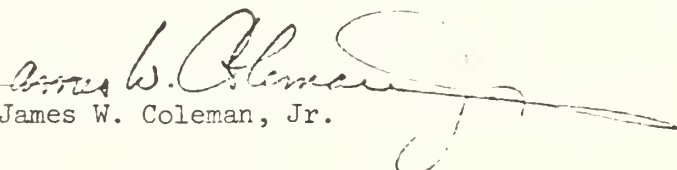
From: Regional Director, Mid-Atlantic Region

Subject: Record of Planning Meeting - Delaware
Water Gap, Package No. 111, Slateford Farm

Manager, DSC	M
Associate Mgr.	M
Chf. Safety Mgmt.	S
Chf. Contract Adm.	CA
Asst. Mgr. Eastern	TEA
Deputy Falls Ch.	EAF
Asst. Mgr. Central	TCE
Asst. Mgr. Western	TWE
Chf. Program Devel.	MCN
DSC Training	MCN
Chf. Prot. Support	PD
Chf. Graphic Sys.	PG
Chf. TIC	PGT
DSC Personnel	AP
Employment	AP
Classification	AP
ADP Support	ADP
Statistics	TNT

NATIONAL PARK SERVICE

We have reviewed your memorandum of March 4, 1986, which records the discussion and recommendations of the meeting of February 4, concerning the preservation/interpretation plans for Slateford Farm House. The record accurately presents the decisions reached at the February 4 meeting. DSC architects should proceed according to the agreed upon approach.

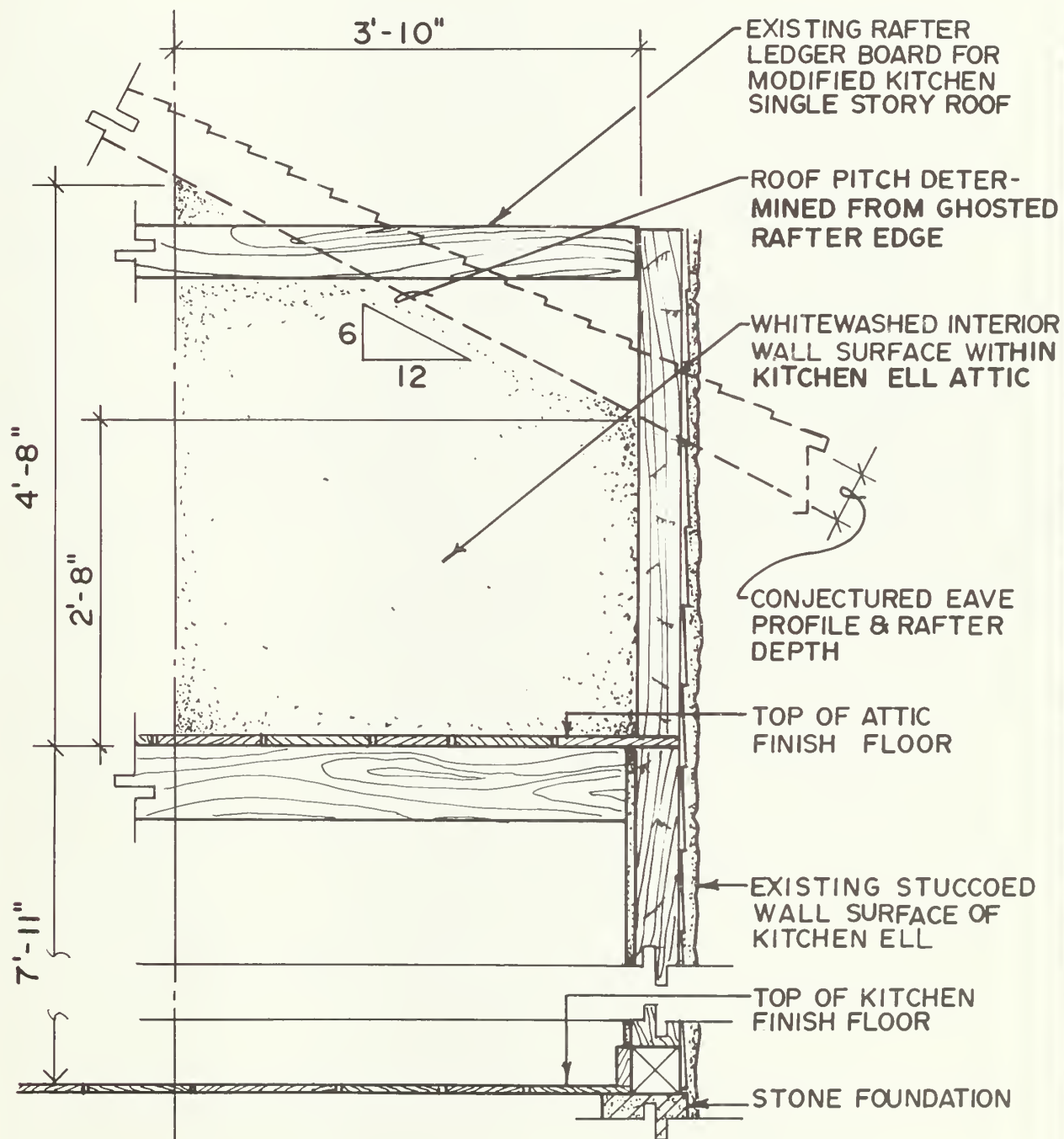

James W. Coleman, Jr.

cc:
Superintendent, Delaware Water Gap
Hugh Miller, WASO, w/c incoming

FIGURES

HISTORIC KITCHEN
ITEM: ROOF PROFILE

FIGURE NO.: 1



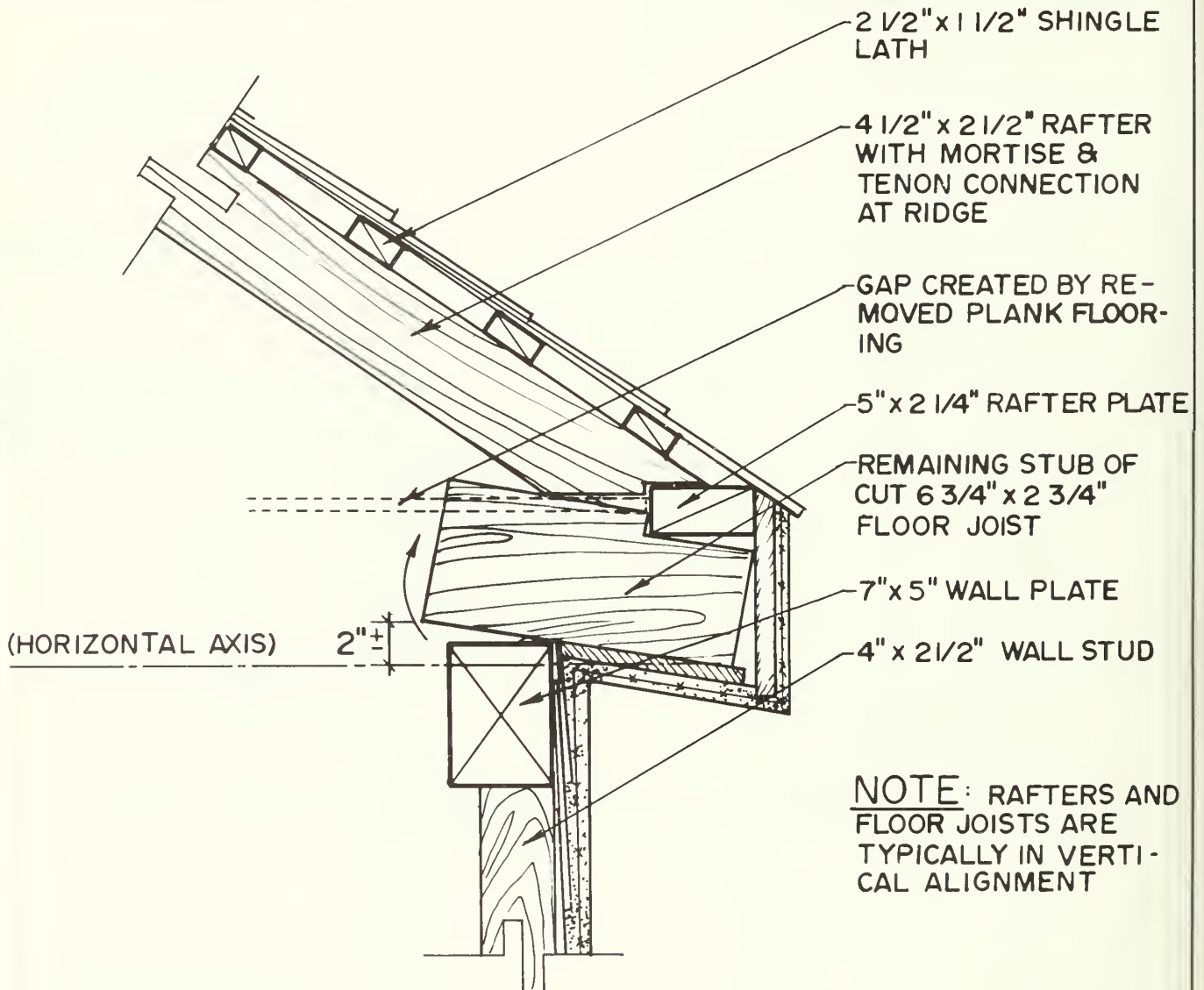
WALL ELEVATION

SCALE: $\frac{3}{4}" = 1' - 0"$



ITEM: HISTORIC MODIFICATION
TO ATTIC SPACE

FIGURE NO.: 2



RAFTER PLATE SECTION (MAIN HOUSE-ATTIC STAIRWELL)

SCALE: 1 1/2" = 1' - 0"



As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the graphics staff of the Denver Service Center. NPS D-95 January 1988

